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Determining the Effect of Inflation on Lost Future Earnings: What Price Equity?

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NOTE

DETERMINING THE EFFECT OF INFLATION ON LOST FUTURE EARNINGS: WHAT PRICE EQUITY?

One of the most deeply entrenched principles of tort law is that compensatory damages are awarded to make an injured party whole.[1] This rule, however, is far easier to state than to apply. Assuming that adequate compensation can be made, determining the cash value necessary to compensate a person for loss of a limb, or a family for loss of its principal wage earner, can be problematic.[2] Certain elements of damage, such as accrued medical expenses, can be translated easily into a cash award. Other elements, however, such as future expenses,[3] pose numerous valuation problems due to the rule that the plaintiff be awarded lump-sum compensation at the time of judgment for all past, present, and future injuries attributable to the defendant's tortious act.[4]

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[1] *E.g.*, 1 T. SEDGWICK, A TREATISE ON THE MEASURE OF DAMAGES § 29, at 24 (1912). Concerning the assessment of damages, the Supreme Court, in 1800, declared that "it is a rational, and a legal principle, that the compensation should be equivalent to the injury." Bussy v. Donaldson, 4 U.S. (4 Dall.) 206, 207 (1800); *see* Milwaukee & St. Paul Ry. v. Arms, 91 U.S. 489, 493 (1875); Lee v. Southern Home Sites Corp., 429 F.2d 290, 293 (5th Cir. 1970). For a general discussion of the historical origins of the compensation principle, see C. MCCORMICK, HANDBOOK ON THE LAW OF DAMAGES § 5, at 21-24 (1935); 1 T. SEDGWICK, *supra*, §§ 7-29, at 5-25; J. STEIN, DAMAGES AND RECOVERY: PERSONAL INJURY AND DEATH ACTIONS § 3, at 2-4 (1972).

[2] *See* Kalven, *The Jury, the Law, and the Personal Injury Damage Award*, 19 OHIO ST. L.J. 158, 160 (1958); Peck & Hopkins, *Economics and Impaired Earning Capacity in Personal Injury Cases*, 44 WASH. L. REV. 351, 351 (1969).

[3] A plaintiff so severely injured as to be unable to regain employment may face several types of future expenses. For example, the type of injury suffered may require ongoing medical treatment or other types of care. *See, e.g.*, Schnebly v. Baker, 217 N.W.2d 708, 724-25 (Iowa 1974); Cords v. Anderson, 80 Wis. 2d 525, 549 & n.6, 259 N.W.2d 672, 683 & n.6 (1977). For general information on the law pertaining to future medical expenses, see J. STEIN, *supra* note 1, § 95, at 152-57. Additionally, damages for future pain and suffering generally are available to a plaintiff if a reasonable probability of continued pain and suffering can be shown. *See generally id.* § 15, at 24.

[4] RESTATEMENT (SECOND) OF TORTS § 910 (1979). According to the Restatement, "the situation as it appears at the time of trial is determinative" of the amount of damages. *Id.*

One of the most significant elements in personal injury and wrongful death recoveries is loss of future earning capacity.[5] A proper award to compensate for lost earning capacity is lost future earnings—the salary the plaintiff would have received had he continued to work until his natural death or retirement.[6] During a plaintiff's working life, however, several factors may affect the size of his annual salary.[7] Among these factors is future inflation.[8]

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comment b; *see, e.g.*, J. STEIN, *supra* note 1, § 169, at 327.

[5] *E.g., In re* United States Steel Corp., 436 F.2d 1256, 1272-74 (6th Cir. 1970), *cert. denied*, 402 U.S. 987 (1971); 1 S. SPEISER, RECOVERY FOR WRONGFUL DEATH § 3:5, at 136-38 (2d ed. 1975); Crosby, *Impact of Inflation and Income Taxes on Future Damages in Personal Injury and Death Cases*, 12 FORUM 542, 542-43 (1977).

[6] J. STEIN, *supra* note 1, § 64, at 103-04. In wrongful death actions, an award of damages is meant to serve one of two functions, depending on the nature of the enabling statute. 1 S. SPEISER, *supra* note 5, § 3:6, at 140 & n.10. Lost future earnings are either construed as representing a loss to the decedent's estate, *see, e.g.*, R.I. GEN. LAWS § 10-7-2 (Supp. 1981) (distribution of recovery to be made in accordance with intestacy laws), or as the decedent's potential contributions to his survivors, *see, e.g.*, ILL. ANN. STAT. ch. 70 § 2 (Smith-Hurd Supp. 1982-1983) (pecuniary loss to "surviving spouse and next of kin" recoverable). *But see* CONN. GEN. STAT. § 52-555 (1981) ("just damages" for injuries of decedent plus reasonable expenses recoverable). *See generally* 1 S. SPEISER, *supra* note 5, § 3:6, at 140-46. After calculating future earnings, the decedent's estimated personal expenditures must be deducted from the earnings award. *E.g.*, Feldman v. Allegheny Airlines, Inc., 524 F.2d 384, 389 (2d Cir. 1975). For a general discussion of other deductions made from lost future earnings in wrongful death cases, see 1 S. SPEISER, *supra* note 5, § 3:6, at 144-46; J. STEIN, *supra* note 1, § 237, at 495-96.

In wrongful death actions, of course, it is the size of the decedent's earnings that is used to measure the plaintiff's damages. 1 S. SPEISER, *supra* note 5, § 3:5, at 136-38. Since the calculation of lost future earnings poses similar problems with regard to inflation in both personal injury and wrongful death actions, this Note will not discuss death claims separately in text but will refer to the "plaintiff's" earnings throughout.

[7] *See, e.g.*, Culver v. Slater Boat Co., 688 F.2d 280, 298 (5th Cir. 1982) (en banc). Factors that would have affected a decedent's actual gross earnings had he lived include inflation, productivity rates, fringe benefits, income taxes, and the nature of his particular occupation. *See, e.g.*, Coyne, *Present Value of Future Earnings: A Sensible Alternative to Simplistic Methodologies*, 49 INS. COUNS. J. 25, 31 (1982) (discussing demographic factors); Dennis, Sirmon & Drinkwater, *Wrongful Death Damages—Fair Compensation for Future Pecuniary Loss Requires Consideration of Economic Trends and Income Tax Consequences*, 47 MISS. L.J. 173, 202-03 (1976) (discussing income taxes, productivity, and inflation); Lipnowski, *The Economist's Approach to Assessing Compensation for Accident Victims*, 9 MANITOBA L.J. 319, 324-25 (1979) (discussing future inflation and productivity gains); Ward, *The Economist in Personal Injury and Death Litigation*, TRIAL, Nov. 1979, at 60, 62 (discussing fringe benefits). For an exhaustive list of considerations that should figure in computing lost future earnings, see O'Connor & Miller, *The Economist-Statistician: A Source of Expert Guidance in Determining Damages*, 48 NOTRE DAME LAW. 354, 368 (1972).

Formerly, income tax liability that would have been assessed against a plaintiff's earnings had he continued to work was ignored in computing lost future earnings since the award itself is not taxable. *See, e.g.*, Flanigan v. Burlington N., Inc., 632 F.2d 880, 886-87 & n.2 (8th Cir. 1980), *cert. denied*, 450 U.S. 921 (1981); Johnson v. Penrod Drilling Co., 510 F.2d 234, 236-37 (5th Cir.), *cert. denied*, 423 U.S. 839 (1975), *overruled on other grounds*,

The treatment to be accorded future inflation in calculating

Culver v. Slater Boat Co., 688 F.2d 280 (5th Cir. 1982) (en banc); McWeeney v. New York, N.H. & H. R.R., 282 F.2d 34, 39-40 (2d Cir. 1960); Beaulieu v. Elliott, 434 P.2d 665, 672-73 (Alaska 1967); Lumber Terminals, Inc. v. Nowakowski, 36 Md. App. 82, 96-97, 373 A.2d 282, 291-92 (Ct. Spec. App. 1977); *see also* I.R.C. § 104(a)(2) (West 1982). The Supreme Court, however, in Norfolk & W. Ry. v. Liepelt, 444 U.S. 490 (1980), recently overturned this rule as a matter of federal law. *Id.* at 498. In *Norfolk*, the Court held that future tax liability is relevant to the computation of lost earnings since it is one of the determinants of the amount awarded to the wage earner's dependents. *Id.* at 493-94. The Court reasoned that since it is relevant to the size of the award, the speculative nature of tax liability should not preclude its consideration. *See id.* at 494. In demonstrating how to calculate the impact of taxes on the lost earnings award, some commentators suggest that the *Norfolk* rule could result in higher lump-sum awards for some plaintiffs. *See* Brady, Brookshire, & Cobb, *Calculating the Effects of Income Taxes on Lost Earnings*, TRIAL, Sept. 1982, at 65, 68.

[8] *See* Dennis, Sirmon & Drinkwater, *supra* note 7, at 182-84. Inflation has been defined "as a general increase in the price level and refers to an average change in all prices." HOUSE COMM. ON THE BUDGET, REPORT OF THE TASK FORCE ON INFLATION, H.R. REP. No. 12, 96th Cong., 1st Sess. 27 (1980) [hereinafter cited as TASK FORCE REPORT]; *see also* P. SAMUELSON, ECONOMICS 270 (10th ed. 1976) (definitions of inflation and deflation).

A distinction must be made between past and future inflation in regard to lost earnings. *See, e.g.*, Willmore v. Hertz Corp., 437 F.2d 357, 359-60 (6th Cir. 1971). Past inflation refers to inflation occurring before a judgment is entered. *See, e.g.*, Steckler v. United States, 549 F.2d 1372, 1380 (10th Cir. 1977). Thus, it affects only earnings that accrue up until the date of judgment. Awards for this portion of lost earning capacity usually are based upon the plaintiff's actual earnings prior to the accident. *See, e.g., In re* United States Steel Corp., 436 F.2d 1256, 1269-70 (6th Cir. 1970) (dictum criticizing an earlier case permitting lost past earnings to be based on average earnings). In some cases, however, the use of average earnings as the basis for determining lost past earnings has been allowed. *See, e.g.*, Steckler v. United States, 549 F.2d 1372, 1380 (10th Cir. 1977); Imperial Oil, Ltd. v. Drlik, 234 F.2d 4, 11-12 (6th Cir. 1956).

Since the award is based upon a static figure, inflation occurring between the date of the injury and the date of judgment will reduce the plaintiff's effective recovery. *See* Note, *Preassessment Inflation as a Factor in Damages*, 48 U. CIN. L. REV. 999, 1001-02 (1979). Currently, attempts to compensate for the effects of such past inflation are limited to including in the final award interest that the award would have earned up to the date of judgment. *See* Ginsburg v. Insurance Co. of N.Am., 427 F.2d 1318, 1321 (6th Cir. 1970); Note, *supra*, at 1000. Several commentators have argued that awarding such interest does not completely redress the plaintiff. *See* Patell, Weil & Wolfson, *Accumulating Damages in Litigation: The Roles of Uncertainty and Interest Rates*, 11 J. LEGAL STUD. 341, 362 (1982); Note, *supra*, at 1000. Proposed modifications of this method include accounting for inflation occurring between the time of the judgment and the time of injury by multiplying the award by the ratio reflecting the change in the inflation rate. *See* Note, *supra*, at 1012-13; *cf.* Steckler v. United States, 549 F.2d 1372, 1380 (10th Cir. 1977) (proposing to account for past inflation by compounding the award by the inflation rate between the date of the injury and the date of judgment).

It should be noted that it may not be accurate to use the same techniques to compensate for both past and future inflation, since it is conceded generally that future inflation is not likely to increase at the same rate. *See, e.g.*, McWeeney v. New York, N.H. & H. R.R., 282 F.2d 34, 38 (2d Cir. 1960); Henderson, *The Consideration of Increased Productivity and the Discounting of Future Earnings to Present Value*, 20 SAN DIEGO L. REV. 307, 321-22 (1975); *see also* Coyne, *supra* note 7, at 25 (assumption of constant future inflation rate

lost future earnings has become a controversial subject.[9] A growing number of courts and commentators agree that the effects of future inflation should be recognized in computing damage awards.[10] There is no agreement, however, as to how future inflation should be incorporated into the structure of existing damage calculations.[11] These issues are interrelated, since the arguments favoring inclusion of inflation necessarily require discussion of the viability, in a courtroom setting, of proposed calculation methods.[12] This Note will analyze these issues in the context of the major policy concerns that they raise, namely, fairness to the plaintiff, certainty of the amount of the award, and courtroom efficiency. The Note then will review the positions taken on these issues by courts and economists, and conclude with a discussion of two proposed solutions that strike reasonable balances among the underlying policy concerns.

THE TRADITIONAL RULE FOR DETERMINING LOST FUTURE WAGES

Before engaging in any meaningful discussion of the policy considerations involved in incorporating inflation into damage calculations, the traditional method for determining lost future earnings must be understood. Under this method, the plaintiff's base annual earnings for the duration of his working life are estimated by adding future wage increases that he is reasonably likely to receive, such as merit raises,[13] to his annual salary as of the date of

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most serious source of error in computing awards).

[9] *See* O'Connor & Miller, *supra* note 7, at 354; *infra* notes 51-108 and accompanying text.

[10] *See, e.g.*, Norfolk & W. Ry. v. Liepelt, 444 U.S. 490, 495 (1980) (dictum); Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 461 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982); O'Shea v. Riverway Towing Corp., 677 F.2d 1194, 1200 (7th Cir. 1982); Coyne, *supra* note 7, at 25-26; Peck & Hopkins, *supra* note 2, at 360-61; Note, *Future Inflation, Prospective Damages, and the Circuit Courts*, 63 VA. L. REV. 105, 106-07 (1977); Note, *Consideration of Inflation in Calculating Lost Future Earnings*, 62 CORNELL L. REV. 803, 804-09 (1977); *infra* notes 69-108 and accompanying text.

[11] *E.g.*, Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 38 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981).

[12] *See, e.g.*, Note, *supra* note 10, at 108. A number of courts that have addressed the inflation issue have noted the need to prevent confusion and prejudice in determining awards and the practical necessity of ensuring efficient management of trials. *See, e.g.*, Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 461 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982).

[13] *See, e.g.*, Culver v. Slater Boat Co., 688 F.2d 280, 286-87 (5th Cir. 1982) (en banc) (dictum). *See generally* Crosby, *supra* note 5, at 543; *cf.* Peck & Hopkins, *supra* note 2, at 353 (traditional damage calculation rule fails to account for inflation, productivity increases,

the injury.[14] The probable length of the plaintiff's working life, or his worklife expectancy,[15] is then determined by using actuarial tables.[16] These figures are multiplied to produce an estimate of the plaintiff's gross future earnings, which is then discounted to produce the amount finally awarded.[17]

Discounting is the process by which the present value of a sum to be realized at some definite time in the future is determined.[18] In this process, each year's base salary is multiplied by a discount factor containing the discount rate,[19] which is an interest rate gen-

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and fringe benefits). Most courts are willing to admit evidence of future wage increases. *See, e.g.*, O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1197-98 (7th Cir. 1982); United States v. English, 521 F.2d 63, 71 n.5 (9th Cir. 1975); Bach v. Penn Cent. Transp. Co., 502 F.2d 1117, 1122 (6th Cir. 1974); Magill v. Westinghouse Elec. Corp., 464 F.2d 294, 300 (3d Cir. 1972). This acceptability appears to depend upon the degree of certainty that the increase would have been realized. *See, e.g.*, Culver v. Slater Boat Co., 644 F.2d 460, 464 n.7 (5th Cir. 1981) (wage increases granted up to the time of trial are included in calculating the award), *rev'd on other grounds*, 688 F.2d 280 (1982) (en banc); State v. Guinn, 555 P.2d 530, 546 (Alaska 1976) (automatic increases based on length of service included in the award).

[14] *See* 1 S. SPEISER, *supra* note 5, § 3:14, at 169-71; J. STEIN, *supra* note 1, § 59, at 96-97. The typical measure of base annual earnings is the plaintiff's salary prior to the injury. *See, e.g.*, Maxwell v. Wanik, 290 Mich. 106, 108, 287 N.W. 396, 397 (1939); McIver v. Gloria, 169 S.W.2d 710, 712 (Tex. 1943); J. STEIN, *supra* note 1, § 64, at 103-04. If, for some reason, the plaintiff's salary at the time of the injury is unrepresentative of his true earning capacity, the use of an average salary figure may be permitted. *E.g.*, Steckler v. United States, 549 F.2d 1372, 1380 (10th Cir. 1977); *see supra* note 8. In other problem situations, such as those arising from the death or serious injury of a minor, a homemaker, or one who otherwise has no employment record, courts have held that just compensation requires that damages be based on what the plaintiff could have earned in the future. *See, e.g.*, Feldman v. Allegheny Airlines, Inc., 524 F.2d 384, 388 (2d Cir. 1975).

[15] Henderson, *supra* note 8, at 308 n.3. Worklife expectancy is the proper measure of the number of years over which the award will accrue "[b]ecause damages in personal injury and wrongful death actions involve the earning capacity of wage earners . . . ." *Id.*

[16] *See* 1 S. SPEISER, *supra* note 5, § 3:27, at 232-38; Peck & Hopkins, *supra* note 2, at 353.

[17] Chesapeake & Ohio Ry. v. Kelly, 241 U.S. 485, 490 (1916); Johnson v. Penrod Drilling Co., 510 F.2d 234, 237 (5th Cir.) (en banc), *cert. denied*, 423 U.S. 839 (1975), *overruled on other grounds*, Culver v. Slater Boat Co., 688 F.2d 280 (5th Cir. 1982) (en banc); Sleeman v. Chesapeake & Ohio Ry., 414 F.2d 305, 308 (6th Cir. 1969); *see infra* notes 55-59 and accompanying text.

[18] S. KELLISON, THE THEORY OF INTEREST 8-9 (1970).

[19] *E.g.*, Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 34 n.4 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981). The discount factor, v, is expressed by the following equation:

$$v = \frac{1}{1 + i} \qquad \text{where } i = \text{the discount rate}$$

S. KELLISON, *supra* note 18, at 8. When the discount factor is multiplied by the requisite future sum, it yields the present value of that sum. *Id.*

erally equated with the current rate on low-risk investments.[20] The resulting annual figures are then added to produce the total lost earnings award.[21] The concept of present value can best be ex-

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[20] *E.g.*, Ward, *supra* note 7, at 63. The discount rate applicable to a particular type of asset depends upon the rate of return that the holder could receive on the asset. *See* P. SAMUELSON, *supra* note 8, at 615 n.4. Most economists recommend that the current interest rate on low-risk government bonds or similar securities is appropriate for lost future earnings awards, reasoning that a reasonably prudent but financially unsophisticated plaintiff would invest the award in these types of securities. *See* Carlson, *Economic Analysis v. Courtroom Controversy: The Present Value of Future Earnings*, 62 A.B.A. J. 628, 629-30 (1976); Sherman, *Projection of Economic Loss: Inflation v. Present Value*, 14 CREIGHTON L. REV. 723, 726-27 (1981); Ward, *supra* note 7, at 63. The federal courts generally have sanctioned this approach. *See* Chesapeake & Ohio Ry. v. Kelly, 241 U.S. 485, 490-91 (1916). Some economists suggest, however, that it is unrealistic to assume that the plaintiff will be knowledgeable enough to seek out low-risk government securities, and that a rate based on the available return on passbook savings accounts should be used. *See, e.g.*, Coyne, *supra* note 7, at 28. In contrast to the foregoing, some state courts, those of Pennsylvania for example, have adopted a standard discount rate. *See, e.g.*, Windle v. Davis, 275 Pa. 23, 29, 118 A. 503, 505 (1922) (6% rate). The recent adoption of the total offset method of accounting for inflation by the Pennsylvania Supreme Court may not have overturned this rule, since it only requires a presumption that the wage increase rate equals the discount rate. *See* Kaczkowski v. Bolubasz, 491 Pa. 561, 583, 421 A.2d 1027, 1037-38 (1980). The standard discount rate also has been applied by the courts of Canada and Australia. *See* Dexter, Murray, & Pollay, *Inflation, Interest Rates and Indemnity: The Economic Realities of Compensation Awards*, 13 U. BRIT. COLUM. L. REV. 298, 301 (1979) (7% Canadian discount rate); Sher, *Damages for Personal Injuries: Current Developments, Future Trends and Suggested Reforms*, 55 AUSTL. L.J. 458, 459-60 (1981) (Australia's highest court appears consistently to apply a 6% discount rate).

[21] *E.g.*, Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 34 n.4 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981). Professor Samuelson gives an excellent explanation of the discounting process:

> To arrive at any asset's present discounted value, let each dollar stand on its own feet; evaluate the present worth of each part of the stream of future receipts, giving due allowance for the discounting required by its payment date. Then simply *add together* all these separate present discounted values.

P. SAMUELSON, *supra* note 8, at 616 (emphasis in original). This process can be described in equation form as follows:

$$\text{Present Value} = \sum_{t=0}^{x} \frac{N}{(1+i)^t}$$

where N = the sum to be discounted over year t
i = the discount rate
t = the number of the year over which N is being discounted (i.e., 1 for the first year, 2 for the second year)
x = total number of years over which income must be discounted.

Id. at 618. It should be noted that the income for each year must be discounted individually. Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 34 n.4 (2d Cir. 1980), *cert. de-*

plained by use of an example. Suppose that *Y* has agreed to accept payment from *X* of a $10,000 debt 10 years from now. The present value of *X*'s promise to pay is an amount that, combined with the return that can be made on it by prudent investment, will equal $10,000 on the date of payment. Similarly, the present value of lost future earnings is an amount that, if invested prudently, will yield a large enough return so that the full amount of the plaintiff's lost earnings will have been realized by the end of his worklife expectancy.[22]

The impetus for discounting lost future earnings is to avoid giving the plaintiff a windfall,[23] since money received today is invariably worth more than the same dollar amount received in the future.[24] During inflationary periods, however, discounting results in undercompensating the plaintiff.[25] This stems from the nature of interest rates, as explained by economist Irving Fisher almost 100 years ago.[26] According to Professor Fisher's theory, interest rates have two components: the rate of return that the investor expects to receive on his investment, or the real rate of interest, and a percentage representing the inflation rate that the investor anticipates over the period of the investment.[27] This additional percentage

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nied, 451 U.S. 971 (1981).

[22] *See* P. SAMUELSON, *supra* note 8, at 615; Franz, *Simplifying Future Lost Earnings*, TRIAL, Aug. 1977, at 34, 36.

[23] *See, e.g.*, Chesapeake & Ohio Ry. v. Kelly, 241 U.S. 485, 489 (1916); O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1199 (7th Cir. 1982); Sleeman v. Chesapeake & Ohio Ry., 414 F.2d 305, 307-08 (6th Cir. 1969); Beaulieu v. Elliott, 434 P.2d 665, 671 (Alaska 1967).

[24] *E.g.*, Chesapeake & Ohio Ry. v. Kelly, 241 U.S. 485, 489 (1916). The *Kelly* Court deemed "self-evident" the idea that present money is worth more than future payment. *Id.* This is true since money presently held can be invested, whereas a promise of future payment cannot. *See* P. SAMUELSON, *supra* note 8, at 615.

[25] *See* Coyne, *supra* note 7, at 25-26; Peck & Hopkins, *supra* note 2, at 353-55; *infra* notes 26-31 and accompanying text.

[26] *See* I. FISHER, APPRECIATION AND INTEREST 75 (1896).

[27] *See, e.g.*, Carlson, *supra* note 20, at 630. Professor Fisher expressed his concept of the relationship between interest rates and inflation:

> The money rate [i.e., the interest rate] and the real rate are normally identical; that is, they will . . . be the same when the purchasing power of the dollar in terms of the cost of living is constant or stable. When the cost of living is not stable, the rate of interest takes the appreciation and depreciation into account to some extent, but only slightly and, in general, indirectly. That is, when prices are rising, the rate of interest tends to be high but not so high as it should be to compensate for the rise; and when prices are falling, the rate of interest tends to be low, but not so low as it should be to compensate for the fall.

I. FISHER, THE THEORY OF INTEREST 43 (1930).

ideally compensates the investor for the diminution of the principal's purchasing power over the investment period.[28] In the context of lost future earnings, this means that the inflation component of the discount rate only purports to compensate the plaintiff for loss of purchasing power on the original discounted award.[29] Even if the discount rate correctly compensates for inflation's effect on the plaintiff's original award, it cannot account for cost-of-living raises and other inflation-linked wage increases that would have increased his total lifetime earnings had he continued to work.[30] It follows that an award for lost future earnings calculated in the traditional manner will undercompensate the plaintiff unless the inflation rate remains constant throughout the plaintiff's worklife expectancy.[31]

A number of methods are available to a court seeking to eliminate this shortfall.[32] Until recently, however, judicial skepticism concerning the accuracy of economic prediction and the intelligibility of economic evidence to the typical juror militated against inclusion of inflation in calculating lost future wages.[33] While this

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[28] *See, e.g.*, O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1199 (7th Cir. 1982); Sherman, *supra* note 20, at 728; Ward, *supra* note 7, at 63.

[29] *E.g.*, Coyne, *supra* note 7, at 25-26; Fisher & Hartnett, *Admissibility of Economic Testimony on Future Inflation*, 18 S. TEX. L.J. 59, 66 n.39 (1977); Sherman, *supra* note 20, at 728-29.

[30] *See, e.g.*, O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1199 (7th Cir. 1982). The inflation component of the discount rate cannot compensate for cost-of-living raises the plaintiff otherwise would have received because such raises increase the plaintiff's annual salary—the basis of the original award. *See supra* notes 27-29 and accompanying text.

[31] *E.g.*, Carlson, *supra* note 20, at 629; Henderson, *supra* note 8, at 310.

[32] *See, e.g.*, Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 38 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981). Methods proposed by courts seeking to deal with the effect of inflation on lost future earnings include: estimating the inflation rate based upon economic evidence and compounding future earnings by this rate prior to discounting, *see, e.g.*, United States v. English, 521 F.2d 63, 76 (9th Cir. 1975), estimating the real rate of interest and discounting with that rate, *see, e.g.*, Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 39 & n.10 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981), and eliminating discounting from the calculation process, *see, e.g.*, Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 461 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982). *See generally* Note, *supra* note 10, at 113-25; Note, *Future Inflation as a Factor in the Determination of Damages*, 12 U. TOL. L. REV. 369, 382-89 (1981).

[33] *See, e.g.*, Norfolk & W. Ry. v. Liepelt, 444 U.S. 490, 494 (1980) (dictum); Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 461 (3d Cir.) (discussing future inflation), *cert. granted*, 103 S. Ct. 50 (1982); Note, *supra* note 10, at 105. Remarks evincing judicial mistrust of economic prediction of inflation can be found in several cases. *See, e.g.*, Johnson v. Penrod Drilling Co., 510 F.2d 234, 236 (5th Cir.) (en banc), *cert. denied*, 423 U.S. 839 (1975), *overruled*, Culver v. Slater Boat Co., 688 F.2d 280 (5th Cir. 1982) (en banc); *cf.* McWeeney v. New York, N.H. & H. R.R., 282 F.2d 34, 36-38 (2d Cir. 1960) (in context of

skepticism has diminished in recent years,[34] these underlying concerns still pose obstacles to the adoption of a new damages calculation rule. Since the arguments against including inflation illuminate the interrelationship of these policy concerns, it is appropriate to consider them in some detail.

ARGUMENTS AGAINST INCLUSION OF INFLATION IN LOST FUTURE EARNINGS

The rule against considering inflation in calculating damages originally was justified on the ground that there was no certainty that inflation would continue in the future, and to assume its continuance amounted to speculation.[35] This rationale was reasonable prior to World War II, when price levels in the American economy tended to be stable and deflation was a more common phenomenon than inflation.[36] Postwar economic statistics, however, demonstrate

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future income tax liability).

[34] *See, e.g.*, Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 35 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981). Recently, federal courts appear to be taking the view that while prediction of future inflation is in some degree speculative, such speculation is more tolerable than ignoring inflation altogether. *See, e.g.*, O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1198-99 (7th Cir. 1982); United States v. English, 521 F.2d 63, 75 (9th Cir. 1975). Several state courts also have taken this view. *See, e.g.*, Seaboard Coast Line R.R. v. Garrison, 336 So. 2d 423, 425 (Fla. Dist. Ct. App. 1976); Cords v. Anderson, 80 Wis. 2d 525, 551-52, 259 N.W.2d 672, 684 (1977).

[35] *See* Kaczkowski v. Bolubasz, 491 Pa. 561, 566-67, 421 A.2d 1027, 1030 (1980). For examples of cases that have both stated and applied the traditional rule of not considering inflation, see Johnson v. Penrod Drilling Co., 510 F.2d 234, 236 (5th Cir.) (en banc), *cert. denied*, 423 U.S. 839 (1975), *overruled*, Culver v. Slater Boat Co., 688 F.2d 280 (5th Cir. 1982); Frankel v. United States, 321 F. Supp. 1331, 1346 (E.D. Pa. 1970), *aff'd*, 466 F.2d 1226 (3d Cir. 1972). *But see* Pfeifer v. Jones & Laughlin Corp., 678 F.2d 453, 461 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982); United States v. English, 521 F.2d 63, 75 (9th Cir. 1975). Many cases, however, merely characterize inflation as "speculative." *See, e.g.*, Williams v. United States, 435 F.2d 804, 807 (1st Cir. 1970); Sleeman v. Chesapeake & Ohio Ry., 414 F.2d 305, 308 (6th Cir. 1969). *But see* Magill v. Westinghouse Elec. Corp., 464 F.2d 294, 300 (3d Cir. 1972) ("valid data" necessary to keep the jury from speculating about inflation). It appears that this characterization is based upon uncertainty as to the continuance of inflation. *See, e.g.*, Culver v. Slater Boat Co., 688 F.2d 280, 287 (5th Cir. 1982) (en banc); Pfeifer v. Jones & Laughlin Steel Co., 678 F.2d 453, 461 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982).

[36] TASK FORCE REPORT, *supra* note 8, at 24; Henderson, *supra* note 8, at 309; *see* P. SAMUELSON, *supra* note 8, at 270. Ample statistical data support the conclusion that inflation was not an American economic problem before World War II. Before 1913, for example, the average annual change in the American price level was 0.1%. *See* ECONOMIC REPORT OF THE PRESIDENT, 1981, at 71 (Table 3-2) (1981) [hereinafter cited as ECONOMIC REPORT]. Between 1919 and the start of World War II, the average annual change was 2.5%. *Id.* From 1946 to 1979, the average annual change was 2.8%. *Id.* These statistics are based on the Consumer Price Index (CPI), which measures changes in the price level based on monthly

a consistent increase in wages and prices.[37] It is generally agreed today that inflation will continue to afflict the American economy.[38]

More difficult to answer is the charge that present economic

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measurements of the prices of a "fixed marketbasket" of goods. TASK FORCE REPORT, *supra* note 8, at 27. The CPI is "the most widely recognized measure of inflation in the United States." *Id.*

[37] *E.g.*, TASK FORCE REPORT, *supra* note 8, at 24. The natural effect of rising prices is to cause the purchasing power of money to decline. P. SAMUELSON, *supra* note 8, at 270-72. As shown by the following chart, measurement of the dollar's purchasing power in terms of its value in 1967 reveals a consistent decline since 1940:

	Annual Average Value as Measured By—	
Year	Producer Prices	Consumer Prices
1940	$2.469	$2.381
1945	1.832	1.855
1950	1.266	1.387
1955	1.170	1.247
1960	1.067	1.127
1965	1.045	1.058
1967	1.000	1.000
1970	.907	.860
1975	.612	.621
1976	.586	.587
1977	.550	.551
1978	.510	.512
1979	.459	.461
1980	.405	.406
1981 (to May)	.372	.372

STATISTICAL ABSTRACT OF THE UNITED STATES, 1981, No. 765, at 458 (Table) (1981). For a summary of the price history of the United States over the postwar period that combines statistics with explanations of why inflation has become such a persistent problem, see TASK FORCE REPORT, *supra* note 8, at 24-26.

[38] *E.g.*, Kaczkowski v. Bolubasz, 491 Pa. 561, 573, 421 A.2d 1027, 1033 (1980); Malabre, *Analysts See Inflation Easing, Then Rising, But Not to Old Peaks*, Wall St. J., Mar. 10, 1982, at 1, col. 6. It should not be assumed that the rate of inflation necessarily will increase in the future. *See, e.g.*, ECONOMIC REPORT, *supra* note 36, at 213. Indeed, some economists have postulated that the rate of increase in inflation may decrease over the course of the 1980's. *See, e.g., id.*; Miller, *Slowdowns in Economic Activity and the Rate of Inflation*, ECON. REV. FED. RES. BANK KAN. CITY, Sept.-Oct. 1981, at 18, 27; *cf.* Malabre, *supra*, at 1, col. 6 (inflation expected to continue at lower rates than in recent past, but increase does not necessarily indicate a long-term trend). Economists expressing this opinion, however, also believe that decreases in inflation depend upon the successful implementation of fiscal policy. *See, e.g., Impact of Inflation on the Economy: Hearings Before the Task Force on Inflation of the House Comm. on the Budget*, 96th Cong., 1st Sess. 249 (1979) (attachment by Prof. Linden); TASK FORCE REPORT, *supra* note 8, at 30; ECONOMIC REPORT, *supra* note 36, at 214-15; Miller, *supra*, at 27. The consensus appears to be that preventing inflation will continue to be a major economic policy concern throughout the 1980's. *See* PRESIDENT'S COMMISSION FOR A NATIONAL AGENDA FOR THE EIGHTIES, THE AMERICAN ECONOMY: EMPLOYMENT, PRODUCTIVITY AND INFLATION IN THE EIGHTIES 47-48 (1980).

techniques for predicting future inflation amount to little more than sophisticated speculation.[39] This contention, voiced by several economists,[40] has elicited two types of response. First, it has been noted that other elements of damages whose determination necessarily requires speculation, such as pain and suffering, are routinely calculated.[41] Second, the practical result of refusing to account for inflation has been deemed identical to that of assuming an inflation rate of zero—an assumption that contradicts available economic data.[42] Arguably, such an assumption is even more spec-

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[39] *See, e.g.,* Feldman v. Allegheny Airlines, Inc., 524 F.2d 384, 392 (2d Cir. 1975) (Friendly, J., concurring dubitante) (citing Truax v. Corrigan, 257 U.S. 312, 342 (1921)) (referring to " 'the dangers of a delusive exactness' " in inflation calculations); Bach v. Penn Cent. Transp. Co., 502 F.2d 1117, 1122 (6th Cir. 1974); Blue v. Western Ry., 469 F.2d 487, 494-96 (5th Cir. 1972), *cert. denied,* 410 U.S. 956 (1973). There has been some concern that juries may attempt to estimate inflation rates based upon their own knowledge. *See, e.g.,* Zaninovich v. American Airlines, Inc., 26 App. Div. 2d 155, 160, 271 N.Y.S.2d 866, 872 (1st Dep't 1966) ("amateurish speculation" concerning inflation not to be considered in damage calculations).

[40] *See, e.g.,* Carlson, *supra* note 20, at 628; Formuzis & O'Donnell, *Inflation and the Valuation of Future Economic Losses,* 38 MONT. L. REV. 297, 299 (1977). *But see* Fisher & Hartnett, *supra* note 29, at 81 (more realistic awards result from the admission of evidence regarding inflationary trends); Ward, *supra* note 7, at 60 (use of probabilities in inflation rate predictions does not necessarily make those predictions speculative).

[41] *See* C. MCCORMICK, *supra* note 1, § 88, at 318; J. STEIN, *supra* note 1, § 9, at 15. In addition to pain and suffering, other elements of damages, such as lost future profits, are sanctioned despite speculation as to their determination. *See* Autowest, Inc. v. Peugeot, Inc., 434 F.2d 556, 564-67 (2d Cir. 1970). Permitting such recovery is justified by an unwillingness to allow tortfeasors to benefit from the uncertainties of estimating a plaintiff's injury. *See* J. Truett Payne Co. v. Chrysler Motors Corp., 451 U.S. 557, 567 (1981); Bigelow v. RKO Radio Pictures, Inc., 327 U.S. 251, 264-65 (1946). This is not to say, however, that there are no guidelines for the jury in determining suitable awards for such damages. The values chosen must have some basis in the evidence presented. *See, e.g.,* 327 U.S. at 264; Autowest, Inc., v. Peugeot, Inc., 434 F.2d 556, 566 (2d Cir. 1970).

[42] *See* Henderson, *supra* note 8, at 309. The assumption of a zero inflation rate does not necessarily mean that the price level is assumed to be unchanging. Usually, it merely implies the assumption of a constant level of price change over time. *See* STATISTICAL ABSTRACT OF THE UNITED STATES, 1981 § 15, at 457 (1981) (defining CPI as a measure of average change in prices). Available data indicates that while the price level, as measured by the CPI, has risen steadily over time, its growth was more rapid in some years than others. *Compare* ECONOMIC REPORT, *supra* note 36, at 294 (showing consistent rise in CPI for the years 1939-1981) *with* TASK FORCE REPORT, *supra* note 8, at 24-26 (discussing irregularities in the size of the increase of the CPI for the years 1940-1979). Because of this history of erratic CPI fluctuations, some economists argue that projection of the current rate of inflation over time still results in undercompensation to the plaintiff. *See, e.g.,* Coyne, *supra* note 7, at 25-26. This shortcoming, however, is common to all of the proposed methods of compensating for inflation, with the possible exception of periodic payment of judgment plans. *See infra* note 123. As the Second Circuit has indicated, however, it is natural to base predictions of future conditions on past trends. Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 37 (2d Cir. 1980), *cert. denied,* 451 U.S. 971 (1981). Consequently, courts do not expect absolute

ulative than attempting to predict the inflation rate.[43] The mere fact that prediction of future inflation involves some speculation, therefore, does not justify refusal to account for inflation in damage awards.

The strongest arguments against recognizing the impact of inflation on damages are pragmatic, and arise from the peculiar difficulties of trying damages issues before a jury. It is contended, for example, that the admission of economic evidence will confuse a jury[44] or result in unfair verdicts due to passion or prejudice.[45] Such arguments are bolstered by the fact that there is greater room for dispute concerning the validity of an economic hypothesis, as opposed to other scientific theories, because economic hypotheses are not susceptible to empirical verification.[46] Indeed, there is little consensus among economists concerning the proper treatment of inflation in damage calculations.[47]

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accuracy in damage awards. *E.g.*, O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1200 (7th Cir. 1982); *Doca*, 634 F.2d at 38. It is submitted that economists, when making proposals concerning the future inflation problem, should be aware of this pragmatism on the part of judges.

[43] *See* Coyne, *supra* note 7, at 29; Formuzis & O'Donnell, *supra* note 40, at 299.

[44] *See, e.g.*, Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 461 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982); Riha v. Jasper Blackburn Corp., 516 F.2d 840, 843 (8th Cir. 1975); Magill v. Westinghouse Elec. Corp., 464 F.2d 294, 300-01 (3d Cir. 1972); McWeeney v. New York, N.H. & H. R.R., 282 F.2d 34, 38-40 (2d Cir. 1960); Carlson, *supra* note 20, at 629; Franz, *supra* note 22, at 37.

[45] *See, e.g.*, Huddell v. Levin, 537 F.2d 726, 743 (3d Cir. 1976); Raines v. New York Cent. R.R., 129 Ill. App. 2d 294, 305-06, 263 N.E.2d 895, 900-01 (Ct. App. 1970), *rev'd on other grounds*, 51 Ill. 2d 428, 283 N.E.2d 230, *cert. denied*, 409 U.S. 983 (1972). While there is concern over presenting economic evidence to a lay jury, the possibility of uninformed speculation by the jury regarding future inflation has been used as an argument in favor of admitting such evidence. *See, e.g.*, Tenore v. Nu Car Carriers, 67 N.J. 466, 481-84, 341 A.2d 613, 621-23 (1975).

[46] *See* J. CRAMER, EMPIRICAL ECONOMETRICS 2 (1971). One reason for the problems of verification posed by economic theory is that a significant portion of important economic data is not quantifiable. *See id.* at 2-3; O. MORGENSTERN, ON THE ACCURACY OF ECONOMIC OBSERVATIONS 3-5 (1963). A more basic flaw is that economic models often are too general to be tested by experimental means. J. CRAMER, *supra*, at 2. Consequently, econometric studies tend to include specific hypotheses which fit the situation and data around which the study is designed, but which have little connection with the economic theories that they purport to prove. *See id.*; P. SAMUELSON, *supra* note 8, at 10-13.

[47] *See, e.g.*, Carlson, *supra* note 20, at 628. Most economists who have debated the role of inflation in damage calculations agree that inflation must be taken into account to produce an accurate estimate of lost future earnings. *See id.* at 629-30; Coyne, *supra* note 7, at 25-26; Fisher & Hartnett, *supra* note 29, at 59-60; Formuzis & O'Donnell, *supra* note 40, at 297-98; Franz, *supra* note 22, at 36; Henderson, *supra* note 8, at 310-11; Lebrenz, *The Inflationary Impact Upon the Economic Loss From Impaired Earning Capacity*, 69 ILL. B.J. 372, 372 (1981); Sherman, *supra* note 20, at 733; Ward, *supra* note 7, at 62.

Despite the problems involved in adopting an inflation-compensating rule, a number of courts and economists have concluded that the traditional view of the role of inflation in damage calculations is no longer viable.[48] Departure from this view, however, requires careful evaluation of the relative importance of and concerns for equity, certainty, and efficiency.[49] The specific question raised is whether the objectives of damages law dictate awards that estimate lost future earnings as precisely as possible, or awards that are insulated as completely as possible from confusion and prejudice. Until recently, federal courts adhered to the traditional rule primarily out of a distrust of economic predictions, as a brief review of judicial treatment of the issue demonstrates.[50] Four stages can be discerned in the courts' movement away from the traditional rule: recognition of the impact of inflation upon awards; acceptance of jury consideration of inflation's impact; admission of economic evidence concerning future inflation rates; and evaluation of methods for including inflation in damage calculations.

JUDICIAL TREATMENT OF INFLATION IN DAMAGE CALCULATIONS

Most early cases conceded that inflation existed.[51] For example, awards rendered during a period of high inflation were not considered excessive if they were larger than awards for similar injuries made during less inflationary periods, even if the difference was substantial.[52] The deflation prevalent during the pre-World

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[48] *See, e.g.*, Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 461 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982); O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1200 (7th Cir. 1982); United States v. English, 521 F.2d 63, 75 (9th Cir. 1975); Lumber Terminals, Inc. v. Nowakowski, 36 Md. App. 82, 94-95, 373 A.2d 282, 290 (Ct. App. 1977); Kaczkowski v. Bolubasz, 491 Pa. 561, 572-73, 421 A.2d 1027, 1033 (1980); Fisher & Hartnett, *supra* note 29, at 59; Henderson, *supra* note 8, at 307; Peck & Hopkins, *supra* note 2, at 352.

[49] *See* Comment, *Inflation and Future Loss of Earnings*, 27 BAYLOR L. REV. 281, 287 (1975); 62 CORNELL L. REV., *supra* note 10, at 816.

[50] *See infra* notes 55-108 and accompanying text. References in the discussion of federal gravitation away from the traditional rule will incorporate both state and federal cases, partly because the federal courts have been slower than the state courts to reject the traditional rule. *See* Henderson, *supra* note 8, at 307, 319 n.20.

[51] *See* Note, *Fluctuating Dollars and Tort Damage Verdicts*, 48 COLUM. L. REV. 264, 264 n.1, 266 (1948). *But cf.* Halloran v. New England Tel. & Tel. Co., 95 Vt. 273, 284-85, 115 A. 143, 148 (1921) (Watson, C.J., dissenting) (permitting jury to consider purchasing power changes contravenes Congress' power to establish a uniform currency). Most early cases took notice of inflation in the context of reviewing an award for excessiveness. *See, e.g.*, Philadelphia & R. Ry. v. McKibbin, 259 F. 476, 479-80 (3d Cir. 1919).

[52] *See, e.g.*, Philadelphia & R. Ry. v. McKibbin, 259 F. 476, 479-80 (3d Cir. 1919); Armentrout v. Virginian Ry., 72 F. Supp. 997, 1001 (S.D. W. Va. 1947) (applying West Virginia

War II era[53] affected damage awards, since the increasing purchasing power of money resulted in overcompensating a plaintiff if his award was not discounted to present value.[54] In 1916, the United States Supreme Court recognized this economic reality in *Chesapeake & Ohio Railway v. Kelly*.[55] In *Kelly*, the Court reversed a wrongful death award because of the trial judge's refusal to require that the jury discount the decedent's lost future earnings to present value.[56] The Court declared that "as a rule . . . the ascertained future benefits ought to be discounted in the making up of the award."[57] Although *Kelly* only mandated discounting of awards determined under federal law,[58] the rule subsequently was adopted by state courts.[59]

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law); Burke v. City & County of San Francisco, 111 Cal. App. 2d 314, 320-21, 244 P.2d 708, 713 (Ct. App. 1952); Gale v. New York Cent. & Hudson River R.R., 13 Hun 1, 4 (3d Dep't 1878), *aff'd*, 76 N.Y. 594 (1879); Halloran v. New England Tel. & Tel. Co., 95 Vt. 273, 275-76, 115 A. 143, 144 (1921); Note, *supra* note 51, at 266.

[53] *See* Henderson, *supra* note 8, at 309; *supra* note 36 and accompanying text.

[54] *See* Henderson, *supra* note 8, at 309.

[55] 241 U.S. 485, 491 (1916).

[56] *Id.* at 493.

[57] *Id.* at 490. The *Kelly* Court's discussion of the factors involved in computing lost future earnings raised several issues that have since proven troublesome to the judiciary. For example, the Court suggested that the discount rate reflects rates available on low-risk investments. *Id.* The highest legal rate of interest need not be used, since that rate may only be obtainable by skilled investors. *Id.* Additionally, the Court alluded to the difficulties involved in requiring jurors to deal with economic considerations, but refused to rule on whether expert economic witnesses or present value tables should be admitted into evidence. *Id.* at 491. These matters were left to the "law of the forum." *Id.* Moreover, there is dictum in *Kelly* suggesting that the Court might have been willing, had the issue arisen, to require the inclusion of future inflation in damage calculations. *Id.* Indeed, the Court emphasized that "[i]n computing the damages recoverable for the deprivation of future benefits, the principle of limiting the recovery to compensation *requires that adequate allowance be made, according to circumstances, for the earning power of money . . .*" *Id.* (emphasis added).

[58] *See id.* at 491. The action in *Kelly* was founded upon the Federal Employers Liability Act. *Id.* at 486.

[59] *See, e.g.*, 1 S. SPEISER, *supra* note 5, § 8:1, at 700; J. STEIN, *supra* note 1, § 169, at 328. Discounting not only generally has been adopted by the states, but has been extended to cover a number of different types of future damages. *See, e.g.*, Noble v. Tweedy, 90 Cal. App. 2d 738, 747, 203 P.2d 778, 783 (Ct. App. 1940) (future damages in contract action); Turcol v. Jenkins, 49 Del. 596, 598-99, 122 A.2d 224, 225 (1956) (wrongful death action); Freeman v. Lanning Corp., 61 Mich. App. 527, 529, 233 N.W.2d 68, 70 (Ct. App. 1975) (future losses on breach of lease); Missouri-Kansas-Texas R.R. v. Edwards, 361 P.2d 459, 467 (Okla. 1961) (personal injury action). Other jurisdictions have adopted the discounting rule by statute. *See* FLA. STAT. ANN. § 768.51(1)(2)-(b) (West Supp. 1982); R.I. GEN. LAWS § 10-7-1.1 (Supp. 1982). The Rhode Island statute also requires some form of compensation for inflation. *See* R.I. GEN. LAWS § 10-7-1.1 (Supp. 1982). A few jurisdictions recently have rejected the discounting rule as a means of accounting for inflation. *See* Beaulieu v. Elliott,

After *Kelly*, courts were disinclined to expand the rules pertaining to the consideration of inflation in calculating damages.[60] This was due, at least in part, to the courts' belief that the inflation-rate component of the discount rate sufficiently recompensed the plaintiff for the impact of inflation on the award.[61] Juries were permitted to consider inflation, but only based upon their common knowledge.[62] It generally was held that instructing the jury on inflation did not constitute reversible error,[63] but it was also held that refusal to give such instruction was not ground for reversal.[64] Consequently, consideration of inflation was essentially a matter for the jury's discretion.[65]

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434 P.2d 665, 671 (Alaska 1967); Kaczkowski v. Bolubasz, 491 Pa. 561, 579 & n.21, 421 A.2d 1027, 1036 & n.21 (1980).

[60] *See, e.g.*, J. STEIN, *supra* note 1, § 170, at 330. Courts have been reluctant to formulate a requirement that inflation be considered in determining tort damages. *See* Lumber Terminals, Inc. v. Nowakowski, 36 Md. App. 82, 94-95, 373 A.2d 282, 290 (Ct. App. 1977); *see also* Schnebly v. Baker, 217 N.W.2d 708, 727 (fewer courts have addressed the question of future inflation than have dealt with past inflation), *rev'd on other grounds*, 221 N.W.2d 739 (Iowa 1974).

[61] *See, e.g.*, Johnson v. Penrod Drilling Co., 510 F.2d 234, 236 & n.1 (5th Cir.) (en banc), *cert. denied*, 423 U.S. 839 (1975), *overruled en banc in* Culver v. Slater Boat Co., 688 F.2d 280 (1982); Frankel v. United States, 321 F. Supp. 1331, 1346 (E.D. Pa. 1970), *aff'd*, 466 F.2d 1226 (3d Cir. 1972); Gulf Offshore Co. v. Mobil Oil Corp., 594 S.W.2d 496, 506 (Tex. Civ. App. 1979), *aff'd in part*, 453 U.S. 473 (1981). The belief that increasing market rates of interest are sufficient to compensate the plaintiff for the impact of inflation on his award is based upon a misconception of what the inflation component of the interest rate is meant to recompense. *See supra* notes 27-29 and accompanying text.

[62] *E.g.*, Riha v. Jasper Blackburn Corp., 516 F.2d 840, 843 (8th Cir. 1975) (applying Nebraska law); Bach v. Penn Cent. Transp. Co., 502 F.2d 1117, 1122 (6th Cir. 1974); Halloran v. New England Tel. & Tel. Co., 95 Vt. 273, 276, 115 A. 143, 144 (1921). *But see* Byrd v. Reederei, 638 F.2d 1300, 1307, *rev'd en banc*, 688 F.2d 324 (5th Cir. 1982); Williams v. United States, 435 F.2d 804, 807 (1st Cir. 1970) (applying Rhode Island law).

[63] *E.g.*, Taenzler v. Burlington N., Inc., 608 F.2d 796, 800 (8th Cir. 1979); Loetzerich v. Texas Pac.-Mo. Pac. Terminal R.R., 325 So. 2d 626, 629 (La. Ct. App. 1976); Atwood v. Lever, 274 So. 2d 146, 149 (Miss. 1973); Tenore v. Nu Car Carriers, Inc., 67 N.J. 466, 475 & n.7, 341 A.2d 613, 618 & n.7 (1975).

[64] *E.g.*, Bearden v. LeMaster, 284 Ala. 588, 590-91, 226 So. 2d 647, 649-50 (1969); Willard v. Hutson, 234 Or. 148, 168, 378 P.2d 966, 976 (1963). *But see* Beanland v. Chicago Rock Island & Pac. R.R., 480 F.2d 109, 115 (8th Cir. 1973).

[65] *See* Fisher & Hartnett, *supra* note 29, at 63-64. It appears to have been the state courts' view that the jury was free to consider or not consider the impact of inflation without evidence. *See, e.g.*, Louisville & N.R. v. Scott's Adm'r, 188 Ky. 99, 103, 220 S.W. 1066, 1068 (1920); Halloran v. New England Tel. & Tel. Co., 95 Vt. 273, 276, 115 A. 143, 144 (1921). Most federal courts apparently do not allow the jury to consider the impact of inflation unless it has evidence upon which to base its conclusions. *See, e.g.*, Blue v. Western Ry., 469 F.2d 487, 496 (5th Cir. 1972); Magill v. Westinghouse Elec. Corp., 464 F.2d 294, 300 (3d Cir. 1972), *cert. denied*, 410 U.S. 956 (1973). *But see* Baker v. Baltimore & Ohio R.R., 502 F.2d 638, 644 (6th Cir. 1974).

Attempts by counsel to compel evaluation of inflation by submitting evidence as to trends of general wage increases originally were rejected, since such evidence was considered too speculative to support a damage award.[66] This rule was relaxed by later decisions admitting evidence showing a trend of wage increases in the plaintiff's occupation.[67] Additionally, evidence showing inflationary trends in the economy at large, or attempting to link increases in national productivity and inflation rates to wages in the plaintiff's occupation were excluded as speculative.[68] While this position still is maintained by some state courts,[69] recent circuit court decisions suggest that admissibility of evidence of inflationary trends is becoming the majority rule in the federal system.[70]

A number of federal cases have devoted extensive discussion to the question of how inflation should be accounted for in damage calculations.[71] These decisions appear to be laying the groundwork

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[66] *See, e.g.*, Magill v. Westinghouse Elec. Corp., 464 F.2d 294, 300 (3d Cir. 1972) (dictum); McWeeney v. New York, N.H. & H. R.R., 282 F.2d 34, 36, 38-39 (2d Cir. 1960) (dictum).

[67] *See, e.g.*, Taenzler v. Burlington N., Inc., 608 F.2d 796, 799, 801 (8th Cir. 1979); Magill v. Westinghouse Elec. Corp., 464 F.2d 294, 300-01 (3d Cir. 1972) (dictum); *In re* United States Steel Corp., 436 F.2d 1256, 1274-75 (6th Cir. 1970), *cert. denied*, 402 U.S. 987 (1971).

[68] *E.g.*, Higginbotham v. Mobil Oil Corp., 545 F.2d 422, 435 (5th Cir.), *cert. denied*, 434 U.S. 830 (1977); Huddell v. Levin, 537 F.2d 726, 743 (3d Cir. 1976); Bach v. Penn Cent. Transp. Co., 502 F.2d 1117, 1122 (6th Cir. 1974); *In re* United States Steel Corp., 436 F.2d 1256, 1275 (6th Cir. 1970), *cert. denied*, 402 U.S. 987 (1971); Williams v. United States, 435 F.2d 804, 807 (1st Cir. 1970).

[69] *See, e.g.*, Raines v. New York Cent. R.R., 129 Ill. App. 2d 294, 303-04, 263 N.E.2d 895, 900 (App. Ct. 1970), *rev'd on other grounds*, 51 Ill. 2d 428, 283 N.E.2d 230, *cert. denied*, 409 U.S. 983 (1972).

[70] *See, e.g.*, Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 39 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981); Steckler v. United States, 549 F.2d 1372, 1376-77 (10th Cir. 1977); United States v. English, 521 F.2d 63, 74 (9th Cir. 1975).

Notably, the Federal Rules of Evidence appear to support the admissibility of inflation testimony. Fisher & Hartnett, *supra* note 29, at 78-79. Inflation testimony usually is given by economists, who are considered experts in a field of "specialized knowledge." *See* FED. R. EVID. 702. More importantly, as Professor Rothstein has observed, "the area testified to need not be 'beyond lay comprehension,'. . . but need only be an area where expert help would be of 'assist[ance]'." P. ROTHSTEIN, UNDERSTANDING THE NEW FEDERAL RULES OF EVIDENCE 80 (1973). Arguably, economic prediction of inflation is such an area. *See* Fisher, *Use of an Economist to Prove Future Economic Losses*, 18 S. TEX. L.J. 403, 411-13 (1977). Moreover, under the federal rules, opinion testimony is admissible even though based on evidence which is inadmissible in itself. FED. R. EVID. 703; *see* P. ROTHSTEIN, *supra*, at 81-82.

[71] *E.g.*, Culver v. Slater Boat Co., 688 F.2d 280, 295-311 (5th Cir. 1982) (en banc); Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 34-40 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981); Feldman v. Allegheny Airlines, Inc., 524 F.2d 384, 386-90 (2d Cir. 1975); United States v. English, 521 F.2d 63, 72-76 (9th Cir. 1975).

for a new damage calculation rule under federal law.[72] In *United States v. English*,[73] the Ninth Circuit reversed a damage award because, in an attempt to compensate for future inflation, the trial judge had refused to discount the plaintiff's lost future earnings to present value.[74] The *English* court found this method clearly erroneous,[75] but recognized that "to ignore inflation when the rates are high is to ignore economic reality."[76] The court concluded that inflation rate changes that could be postulated with "some reliability" could be taken into account.[77] The *English* court proposed a formula under which gross future earnings are compounded by the estimated future inflation rate, before deducting taxes and decedent's personal expenditures.[78] This figure is then discounted to present value.[79]

Following the Ninth Circuit's decision in *English*, the Second Circuit, in *Feldman v. Allegheny Airlines, Inc.*,[80] upheld a district court's award based upon Connecticut law, insofar as it accounted for inflation by decreasing the discount rate by the estimated rate of future inflation.[81] After reviewing a number of state and federal

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[72] *See* Note, *Future Inflation*, *supra* note 10, at 106; Note, *Considering Inflation in Calculating Lost Future Earnings*, 18 WASHBURN L.J. 499, 499 (1979).

[73] 521 F.2d 63 (9th Cir. 1975).

[74] *Id.* at 71 & n.7. In *English*, a wrongful death claim was brought under the Federal Tort Claims Act, 28 U.S.C. § 2674 (1976). 521 F.2d at 65. The law to be applied in such an action is "the law of the place where the act or omission occurred." 28 U.S.C. § 1346(b) (1976). Since the *English* plaintiff's injury occurred in California, the Ninth Circuit applied California law in deciding damage issues. 521 F.2d at 65.

[75] 521 F.2d at 72.

[76] *Id.* at 75; *see, e.g.*, Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 435, 460-61 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982); O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1200 (7th Cir. 1982).

[77] 521 F.2d at 75-76.

[78] *Id.* at 76.

[79] *Id.* The *English* method subsequently was adopted by the Tenth Circuit in Steckler v. United States, 549 F.2d 1372, 1378 (10th Cir. 1977). The *Steckler* court reversed an award because of the trial court's failure to account for inflation in calculating lost future earnings. *Id.* at 1380. The court briefly summarized the total offset method of Beaulieu v. Elliott, 434 P.2d 665, 671 (Alaska 1967), *see infra* note 100, and the admission of evidence of inflationary trends in Riha v. Jasper Blackburn Corp., 516 F.2d 840, 845 (8th Cir. 1975), as well as the *Feldman* and *English* approaches. 549 F.2d at 1377-78. While the court did not explain its doubts regarding the *Beaulieu*, *Riha*, and *Feldman* approaches, it did state its belief that the *English* approach was the "best rationale" since it dealt more adequately with "inflation trends." *See id.*

[80] 524 F.2d 384 (2d Cir. 1975).

[81] *Id.* at 388. *Feldman* involved a wrongful death action governed by Connecticut law. *Id.* at 386. Connecticut law requires that recovery in wrongful death cases be measured in terms of the value to the decedent of the loss of her life. *Id.* Under this standard of valua-

cases dealing with inflation questions, the *Feldman* court observed that while estimating inflation requires some recourse to speculation, such estimations have been countenanced by state courts in the past.[82]

The most recent circuit court cases to evaluate methods of accounting for inflation have been influenced by the decisions in *Feldman* and *English,* although each has reached a slightly different conclusion concerning the wisdom of the *English* and *Feldman* approaches.[83] In *Doca v. Marina Mercante Nicaraguense, S.A.,*[84] the Second Circuit upheld the trial court's decision to take inflation into account.[85] The *Doca* court examined its prior cases, including *Feldman,* in which it had looked favorably upon including inflation in the determination of lost future earnings.[86] Although refusing to adopt a calculation method by judicial fiat, the court indicated cautious approval of a method similar to the *Feldman* approach.[87] In *O'Shea v. Riverway Towing Co.,*[88] the Seventh Cir-

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tion, the court found no error in the district judge's attempt to compensate for the effect of inflation on the award. *Id.* at 387-88. The amount of the award, however, was held to be erroneous due to the district judge's underestimation of the decedent's living expenses. *Id.* at 389-90.

[82] *Id.* at 387. In his oft-cited concurrence, Judge Friendly observed that the state and federal decisions on the question of estimating inflation are "in a stage of uncertainty and flux," and that in many instances state case law yields no clue as to how the highest state courts would rule on an inflation question. *Id.* at 390 & n.1 (Friendly, J., concurring dubitante). While critical of the assumptions accepted by the majority in calculating the award, Judge Friendly was reluctant to advocate a remand since the parameters of state law were so uncertain. *Id.* at 393 (Friendly, J., concurring dubitante).

[83] *See, e.g.,* Culver v. Slater Boat Co., 688 F.2d 280, 309-10 (5th Cir. 1982) (en banc); Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 460-61 (3d Cir.), *cert. granted,* 103 S. Ct. 50 (1982); O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1200 (7th Cir. 1982); Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 38-40 (2d Cir. 1980), *cert. denied,* 451 U.S. 971 (1981).

[84] 634 F.2d 30 (2d Cir. 1980), *cert. denied,* 451 U.S. 971 (1981).

[85] 634 F.2d at 40. The *Doca* court recognized that no evidence had been submitted justifying the use of the low one percent discount rate adopted by the district court. *Id.* Of greater significance was the court's finding that by both removing the inflation-compensating component from the discount rate and including cost-of-living increases, the district court had double-counted inflation. *Id.*

[86] *Id.* at 35. The court observed that "[i]n this Circuit, the issue [of inflation] has been considered but not resolved." *Id.* The court examined cases from other circuits which made allowance for inflation. *Id.* at 35-36. Since *Doca* involved a maritime personal injury claim, it was decided under federal law. *See id.* at 32.

[87] *Id.* at 38-40. The *Doca* court observed that the data gathered in *Feldman* showed "a fairly constant relationship between interest and inflation rates," and that this relationship might be used to account directly for the effects of inflation. *Id.* at 37-39. The court also indicated that, based on the data presented in *Feldman,* a standard real rate of two percent could be used in all lost earnings calculations. *Id.* at 39-40 & n.10.

cuit upheld an award made by a district judge who had considered a significant amount of inflation evidence, including testimony of the plaintiff's expert economist.[89] Like the *Doca* court, the *O'Shea* panel reviewed a number of different approaches to the problem.[90] The court examined the methods espoused by *English* and *Feldman*,[91] noting their similarities,[92] and indicated that both were acceptable.[93] The *O'Shea* court declined, however, to mandate the use of a particular method in figuring inflation into damages.[94]

The most recent opinion examining calculation methods in detail was delivered by the Fifth Circuit in *Culver v. Slater Boat Co.*[95] The *Culver* court abandoned the traditional rule in favor of weighing economic evidence on a case-by-case basis to determine the extent to which inflation should be included in lost future earnings.[96] After evaluating and rejecting its prior contrary deci-

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[88] 677 F.2d 1194 (7th Cir. 1982). *O'Shea* involved a personal injury action brought under federal admiralty jurisdiction. *Id.* at 1196.

[89] *Id.* at 1200-01. The trial judge allowed the plaintiff's economist to testify as to his methodology and calculations as well as to his earnings estimates. *Id.* at 1196-97. The economist presented a series of earnings estimates ranging from $50,000 to $114,000, depending upon the discount rate selected. *Id.* at 1197. The trial judge awarded $86,033 for lost future earnings without explaining how he arrived at that figure, despite the federal rule requiring a judge trying a case without a jury to give a written explanation for the award that he makes. *Id.* at 1201; *see* FED. R. CIV. P. 52(a). Since the trial court might have arrived at its award by assuming "reasonable" inflation and discount rates of three percent and two percent respectively, the award was held not to be unreasonably high. *See* 677 F.2d at 1201.

[90] 677 F.2d at 1199-1200.

[91] *Id.* The *O'Shea* court reviewed the *Feldman* and *English* approaches without mentioning either case by name. *See id.*

[92] *Id.* at 1200. The *Feldman* and *English* methods produce close, though not identical results. *See* Feldman v. Allegheny Airlines, Inc., 524 F.2d at 391 (Friendly, J., concurring dubitante). Indeed, the *Feldman* concurrence noted a less than $2,000 differential when both methods are applied to a $250,000 award. *Id.* (Friendly, J., concurring dubitante).

[93] 677 F.2d at 1200.

[94] *Id.* The *O'Shea* court explained that discounting without including future inflation in base earnings undercompensates the plaintiff. *Id.* The court also mentioned some elements of the economist's method that the defendant could have challenged as erroneous. *Id.* at 1200-01. For example, inflation is not the only factor that causes base earnings to rise, contrary to the economist's assumption. *Id.* at 1200. Additionally, the court indicated that merit raises have an impact, as do real wages, in other sectors of the economy. *Id.* The economist was overly optimistic, the court believed, in assuming that the plaintiff, a 57-year old woman not in robust health, would continue to work full time until her 70th birthday. *Id.* The court also raised the point that a woman in the plaintiff's tax bracket would be unlikely to invest in tax-free municipal bonds, as her economist assumed. *Id.* at 1201. Finally, the court questioned the economist's deduction of all taxes that the plaintiff would have been assessed on the lost earnings; the plaintiff would have to pay taxes only on the interest she would receive on the award. *Id.*

[95] 688 F.2d 280 (5th Cir. 1982) (en banc).

[96] *Id.* at 310-11. The *Culver* decision overruled Johnson v. Penrod Drilling Co., 510 F.2d

sions, the court analyzed available inflation-compensating methods.[97] Like the Second[98] and Seventh Circuits,[99] the Fifth Circuit concluded that inflation evidence should be admissible, but that it would be inappropriate to adopt a particular calculation method as a matter of law.[100]

Unlike its sister circuits, the Third Circuit in *Pfeifer v. Jones & Laughlin Steel Corp.*,[101] adopted a rule to account for the impact of inflation on lost future earnings.[102] In *Pfeifer*, the court up-

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234 (5th Cir.) (en banc), *cert. denied*, 423 U.S. 839 (1975), which held that inflation is too speculative to be included in future damage calculations. 688 F.2d at 283; *see* 510 F.2d at 241. The *Penrod* court took judicial notice of the existence of inflation, but concluded that present inflation did not render future inflation sufficiently certain to justify including it in a damages calculation rule. 510 F.2d at 236. The court justified its holding by stating that inflationary increases could be symptoms of an approaching recession or depression, instead of demonstrating a continuing inflationary trend. *Id.* The court also stated that increases in the discount rate caused by inflation would suffice to mitigate inflation's impact on the plaintiff's award. *Id.*

[97] *See* 688 F.2d at 295-306. The *Culver* court reversed the district court, which had refused to permit the inflation issue to be raised at trial by excluding relevant evidence, jury instructions, and interrogatories. *Id.* at 283.

[98] *See* Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 39 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981).

[99] *See* O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1200 (7th Cir. 1982).

[100] *See* 688 F.2d at 308, 310-11. The court devoted most of its attention to the "total offset" method and the *Feldman* rule. *See id.* at 302. Under the total offset method, the inflation rate is presumed to equal the discount rate, and is removed from the award by eliminating the discounting process. *Id.* at 299 & nn.26-27. The court rejected this approach, however, since it does not take into account the earnings histories of individual plaintiffs and would tend to overcompensate the plaintiff if the rate of wage increase in his industry was less than the CPI. *See id.* at 299, 308.

The *Feldman* rule was criticized on two grounds. *See id.* at 302. First, the court noted that this rule necessarily assumes that the plaintiff's future earnings would have kept pace with inflation, which may not be true. *Id.* Second, the *Feldman* method's accuracy is lessened if future economic conditions differ significantly from the present conditions. *Id.* Despite these problems, the court considered the *Feldman* method acceptable. *Id.* at 302.

A number of the Fifth Circuit judges disagreed with the *Culver* majority. Judge Hill thought that the *Feldman* approach should be adopted for use in future earnings calculations. *Id.* at 312 (Hill, J., concurring). Judge Hill viewed the evidence-weighing approach as granting the jury too much latitude to speculate about the appropriate rate of future inflation without offering sufficient guidance. *Id.* In a dissent, Judge Clark contended that the *Penrod* rule was preferable to one requiring juries to wrestle with conflicting economic evidence. *See id.* at 314 (Clark, J., dissenting). Judge Clark agreed with the majority, however, that it was incorrect to exclude evidence of merit raises and productivity-based increases under the *Penrod* rule. *Id.* (Clark, J., dissenting). Judge Johnson argued vigorously for adoption of the total offset method. *See id.* at 317-24 (Johnson, J., dissenting). Finally, Judge Tjoflat dissented on the ground that the plaintiffs had not preserved the inflation issue for appeal. *Id.* at 315 (Tjoflat, J., dissenting).

[101] 678 F.2d 453 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982).

[102] 678 F.2d at 461.

held the trial judge's attempt to compensate for the effect of inflation by not discounting the award, thus expressly embracing the rule recently adopted by the Pennsylvania Supreme Court.[103] In its analysis of the propriety of the award, the court chose not to compare this "total offset" approach with other possible methods.[104] Instead, the *Pfeifer* court focused its analysis upon the ability of a federal court applying federal law to adopt a state standard.[105] After determining that there was "no jurisprudential impediment" to the adoption of the Pennsylvania rule, the court reviewed Pennsylvania case law on the inflation issue and concluded that "an honest and accurate calculation must consider the stark reality of inflationary conditions."[106] Finally, the *Pfeifer* court noted with approval that use of the total offset rule avoided speculation as well as " 'complicated, time consuming economic testimony,' " and rendered more predictable awards.[107]

Presently, the federal courts appear to take the position that while inflation should be included in lost future earnings, the suitability of the method employed should be determined on a case-by-case basis.[108] Given the courts' justifiable concern with balanc-

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[103] *Id.* The method adopted by the Pennsylvania Supreme Court in Kaczkowski v. Bolubasz, 491 Pa. 561, 421 A.2d 1027 (1980), has been referred to as the "total offset" method, *see Pfeifer*, 678 F.2d at 461, or the "Alaska Rule," *see* Culver v. Slater Boat Co., 688 F.2d 280, 299 (5th Cir. 1982) (en banc).

[104] *See* 678 F.2d at 457-61.

[105] *See id.* at 456.

[106] *Id.* at 458-61.

[107] *Id.* (quoting Kaczkowski v. Bolubasz, 491 Pa. 561, 583, 421 A.2d 1027, 1038 (1980)).

[108] *E.g.*, O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1199-1201 (7th Cir. 1982); Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 34-40 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981); Taenzler v. Burlington N., Inc., 608 F.2d 796, 799-801 (8th Cir. 1979). The only circuit that continues to espouse the traditional rule with respect to inflation is the First Circuit. *See* Williams v. United States, 435 F.2d 804, 807 (1st Cir. 1970) (applying Rhode Island law). In *Williams*, the First Circuit, interpreting Rhode Island law, held that future inflation could not be included in determining lost future earnings. *Id.* at 807. In a subsequent case, again applying Rhode Island law but which law now included an inflation-compensation statute, the First Circuit reached a result different than that rendered in *Williams*. *See* Turcotte v. Ford Motor Co., 494 F.2d 173, 184-87 (1st Cir. 1974). Thus, it is uncertain whether the First Circuit would apply the principles used in *Williams* to a case decided under federal law.

Although it has yet to rule on the inflation question, the Supreme Court has indicated several times in dicta that it approves of accounting for inflation in calculating future damages. *See, e.g.*, Norfolk & W. Ry. v. Liepelt, 444 U.S. 490, 494 (1980); Grunenthal v. Long Island, R.R., 393 U.S. 156, 160-61 (1968); Chesapeake & Ohio Ry. v. Kelly, 241 U.S. 485, 491 (1916). In *Norfolk*, the Court considered whether future income tax liability on lost future earnings should be taken into account in a wrongful death action brought under the Federal Employers' Liability Act. *See id.* at 490-91. The Court held that the exclusion of evidence

ing considerations of equity, certainty, and efficiency in determining damages, this position appears reasonable.[109] It is favored by several economists[110] who contend that greater fairness to the plaintiff will result if detailed information about wage trends in the plaintiff's specific occupation is used to determine lost future earnings, rather than across-the-board application of a general formula.[111]

Serious questions remain, however, concerning the risk of prejudice posed by economic testimony. One obvious source of prejudice is the public's tendency to distrust the credibility of economic calculations.[112] Furthermore, a jury may be unable to comprehend economic presentations.[113] The evidentiary approach, therefore, may leave the plaintiff no better off than if the traditional rule were still in force.[114] Indeed, the plaintiff may be at a disadvantage if the jury does not fairly evaluate his economic

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demonstrating the impact that income taxes would have had on a decedent's lost future earnings was reversible error. *Id.* at 494. The Court observed:

> [T]here are many variables that may affect the amount of a wage earner's future income-tax liability. . . . But future employment itself, future health, future personal expenditures, future interest rates, and future inflation are also matters of estimate and prediction. Any one of these issues might provide the basis for protracted expert testimony and debate. But the practical wisdom of the trial bar and the trial bench has developed effective methods of presenting the essential elements of an expert calculation in a form that is understandable by juries that are increasingly familiar with the complexities of modern life.

Id. at 494.

[109] *See supra* notes 35-47 and accompanying text. The term "efficiency" will be used in this Note as it relates to a number of issues concerning the actual conduct of trials, such as avoidance of wasted time and unwarranted evidence. *See, e.g.*, Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 461 (3d Cir.) (total offset method contributes to "judicial efficiency"), *cert. granted*, 103 S. Ct. 50 (1982); Riha v. Jasper Blackburn Corp., 516 F.2d 840, 843 n.4 (8th Cir. 1975) (evidence of future inflation and tax considerations "will create unmanageable trials").

[110] *See* Coyne, *supra* note 7, at 27-28; Fisher & Hartnett, *supra* note 29, at 79-80; Lebrenz, *supra* note 47, at 375; Peck & Hopkins, *supra* note 2, at 361.

[111] *See, e.g.*, Taenzler v. Burlington N., Inc., 608 F.2d 796, 800 (8th Cir. 1979); Bach v. Penn Cent. Transp. Co., 502 F.2d 1117, 1122 (6th Cir. 1974).

[112] *See* O. MORGENSTERN, *supra* note 46, at 9. A problem often mentioned by the courts is that rather than being doubtful, the jury may accept detailed economic calculations with too little skepticism. *See* Taenzler v. Burlington N., Inc., 608 F.2d 796, 800 (8th Cir. 1979).

[113] *See, e.g.*, P. SAMUELSON, *supra* note 8, at 8-9; Fisher, *supra* note 70, at 410.

[114] *See, e.g.*, Culver v. Slater Boat Co., 644 F.2d 460, 464 (5th Cir. 1981), *rev'd on other grounds en banc*, 688 F.2d 280 (1982). In *Culver*, the trial judge permitted evidence of "provable increases" in the decedent's wages up to the date of trial to be considered by the jury. *Id.* The jury apparently rejected this evidence, basing the award instead on the decedent's average earnings for the 5-year period preceding his death. *Id.*

evidence.[115]

It is suggested that the federal courts should closely scrutinize the various methods proposed by economists with a view toward eventually adopting a uniform inflation calculation rule. Courts seem disposed to adopt the method of accounting for inflation that requires the least recourse to economic evidence while producing reasonably fair and nonspeculative awards.[116] With this in mind, the various proposals espoused by commentators and economists will be examined briefly.

THE ECONOMISTS' PROPOSALS FOR INCLUDING INFLATION IN DAMAGES

Several commentators believe that lump-sum compensation does not adequately compensate a plaintiff in certain cases.[117] As an alternative, they recommend a system of installment payments.[118] The two proposals usually discussed are structured set-

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[115] *See id.* at 463. *Culver* illustrates how a jury's misinterpretation of economic evidence can lead to substantial injustice. *See id.* In *Culver*, the plaintiff submitted no evidence as to what would constitute a proper discount rate. *Id.* at 464. The defendant's expert suggested a rate of 9.125%, the current rate on government bonds. *Id.* at 463 & n.4. On being instructed to discount the award "by a percentage that you feel represents an appropriate rate of interest at the present time," the jury chose to discount by 25%. *Id.* at 463 & nn.2-3. The trial judge substituted 9.125% in calculating the award, an act the Fifth Circuit held not to be an abuse of discretion. *Id.* at 463, 464-65.

[116] *See, e.g.*, Culver v. Slater Boat Co., 688 F.2d 280, 308 (5th Cir. 1982) (en banc); Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 40 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981). The federal courts have looked most favorably on inflation-compensation measures that seemed likeliest to provide shortcuts to a fair award. This is illustrated by the Third Circuit's adoption of the total offset approach in Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 461 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982) and the Second Circuit's suggestion of a two percent "real rate" discount figure in Doca v. Marina Mercante Nicaraguense, 634 F.2d 30, 39-40 (1980), *cert. denied*, 451 U.S. 971 (1981). The concern with avoiding undue speculation, confusion, and prejudice has led other circuits to develop equally cautious approaches. *See, e.g.*, Taenzler v. Burlington N., Inc., 608 F.2d 796, 800-02 (8th Cir. 1979); Bach v. Penn Cent. Transp. Co., 502 F.2d 1117, 1122 (6th Cir. 1974).

[117] *See* Krause, *Structured Settlements for Tort Victims*, 66 A.B.A. J. 1527, 1527 (1980); Lilly, *Alternatives to Lump Sum Payments in Personal Injury Cases*, 44 INS. COUNS. J. 243, 247 (1977). The most often mentioned flaw that commentators find with lump-sum payments is the possibility that a plaintiff will squander an award or lose it through mismanagement. *See, e.g.*, Henderson, *Restoring the Tort Victim to Pre-Injury Position: A Goal on Which We Can All Agree*, 67 A.B.A. J. 301, 302 (1981).

[118] *See* Lilly, *supra* note 117, at 247; Sedgwick & Judge, *The Use of Annuities in Settlement of Personal Injury Cases*, 41 INS. COUNS. J. 584, 584 (1974). Most advocates of installment payments focus upon the importance of avoiding unduly large awards to plaintiffs. *See, e.g.*, Elligett, *The Periodic Payment of Judgments*, 46 INS. COUNS. J. 130, 130 (1979); Krause, *supra* note 117, at 1527; Sedgwick & Judge, *supra*, at 584.

tlements and periodic payment of judgments.

The phrase "structured settlement" is an all-encompassing term used to describe any settlement that includes a periodic payment plan to provide for future expenses of an injured party.[119] Because they generally involve "locked in" periodic payments, structured settlements have been criticized on the ground that they allow defendants to minimize costs while failing to take into account the payments' decreasing purchasing power which results from rising inflation.[120] Since these arrangements are consensual, however, careful planning on the part of counsel for both parties can ensure a settlement that is acceptable and beneficial to all.[121]

A more innovative approach replaces the traditional lump-sum judgment with a periodic payment of judgment plan.[122] Calculating

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[119] *E.g.*, Kreindler, *Structured 'Lemons'*, N.Y.L.J., July 20, 1981, at 1, col. 1. Structured settlements typically feature an annuity to compensate for future damages and lump-sum payments for accrued expenses. *E.g.*, Lilly, *supra* note 117, at 243. Several different annuities can be combined in the same settlement. *See* Krause, *supra* note 117, at 1528.

[120] *E.g.*, Kreindler, *supra* note 119, at 2, col. 1. Structured settlements are often cheaper for a defendant-insurance company than a lump-sum award, since it can purchase an annuity for less money than the plaintiff can. *Id.* at 2, col. 2.

[121] Corboy, *Structured Injustice: Compulsory Payment of Judgments*, 66 A.B.A. J. 1524, 1524 (1980); *see, e.g.*, Krause, *supra* note 117, at 1528-29; Lilly, *supra* note 117, at 247; Sedgwick & Judge, *supra* note 118, at 587. The defendant can arrange a settlement that provides for future increases in payments to compensate for inflation while retaining the advantage of decreased costs. *See* Kreindler, *supra* note 119, at 2, col. 1. Opponents of the structured settlement concept nonetheless concede that there are circumstances in which it will be to the plaintiff's advantage to make a structured settlement. *See id.* The key to arranging a structured settlement that will satisfy both parties lies in making sure that the plaintiff understands the limitations of such a settlement. *See, e.g., id.* At any rate, lawyers and judges will have to learn to think in terms of structuring awards for the plaintiff's long-range benefits in order to work effectively with structured settlements. Krause, *supra* note 117, at 1528.

It also has been suggested that increased use of structured settlements will benefit plaintiffs' attorneys directly by giving them the option of asking for payment from the defendant in annuity form, with its concomitant tax advantages. *See* Lilly, *supra* note 117, at 246; Sedgwick & Judge, *supra* note 118, at 585. *But see* Grossman & Roman, *The Model Periodic Payment of Judgments Act: An Economic Analysis*, TRIAL, May, 1982, at 62, 65 (use of periodic installment legal fees raises serious legal and ethical questions).

[122] *See, e.g.*, MODEL PERIODIC PAYMENT OF JUDGMENTS ACT § 3, 14 U.L.A. 6 (West Supp. 1982) (the Act). Many states have adopted legislation requiring periodic payments in specific actions, such as those brought under workers' compensation or no-fault insurance plans. *See* Elligett, *supra* note 118, at 133-34. Approximately one-half of the states have no-fault automobile insurance legislation, which generally calls for some type of periodic payment. *Id.* at 134. Much of this legislation is patterned on the Uniform Motor Vehicle Accident Reparations Act. *Id.* at 133-34; *see* UNIF. MOTOR VEHICLE ACCIDENT REPARATIONS ACT § 27, 14 U.L.A. 102-03 (1980). For examples of periodic payment provisions in state legislation, see ARK. STAT. ANN. § 66-4021 (1980) (monthly payments required); FLA. STAT. ANN. § 627.736(1)(b) (West Supp. 1982) (disability payments must be made "not less than every 2

present value and future inflation is unnecessary under such a plan since the payments can be adjusted as they accrue.[123] Because of the difficulties in application that have arisen, such as determining the types of actions in which it should be used,[124] there currently is little enthusiasm for expanded application of this approach.[125]

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weeks"); N.Y. INS. LAW § 675(1) (McKinney Supp. 1982-1983) (payment to be made as loss accrues). It has been suggested that such plans should be applied in personal injury and wrongful death cases as well, particularly where large verdicts are probable. *See, e.g.*, Elligett, *supra* note 118, at 134. A number of states have enacted provisions allowing periodic payments in medical malpractice actions. *See, e.g.*, CAL. CIV. PROC. CODE § 667.7 (West 1980); FLA. STAT. ANN. § 678.51 (West Supp. 1981); KAN. STAT. ANN. § 60-2609 (Supp. 1981).

Periodic payments are advantageous because they eliminate the possibility that the plaintiff will squander a large lump-sum recovery intended to provide him with lifetime income. *See, e.g.*, Elligett, *supra* note 118, at 131; Henderson, *supra* note 117, at 302; Sedgwick & Judge, *supra* note 118, at 584. Similarly, since payments can be terminated if the plaintiff fails to live out his predicted lifespan, his heirs will not enjoy a windfall. *See, e.g.*, Elligett, *supra* note 118, at 140-41. Specific mechanisms proposed for eliminating windfalls by terminating future medical benefits and pain and suffering damages on the plaintiff's death have drawn strong criticism. *See, e.g.*, Corboy, *supra* note 121, at 1526; Grossman & Roman, *supra* note 121, at 64.

[123] Present value and inflation considerations are not irrelevant under a periodic payment plan if the plan does not build inflation increases into future installments, or allow frequent reevaluation of judgments. The Act, for example, requires future damages to be computed in current dollars. *See* MODEL PERIODIC PAYMENT OF JUDGMENTS ACT § 5, 14 U.L.A. 9 (West Supp. 1982). Section 7 of the Act provides for adjustments to be made at yearly intervals, beginning 1 year after the judgment is first entered. *See id.* § 7. Adjustments are made in the following manner: the base earnings figure is discounted three percent annually, then compounded by the current discount rate on 52-week treasury bills. *Id.* §§ 7(c), 10. It has been argued that this method systematically undercompensates the plaintiff and thus its enactment would be imprudent. *See* Grossman & Roman, *supra* note 121, at 63. Tax complications arise as well, since if the award is invested in treasury bills, as the drafters suggest, income from it will be taxable. *See* Corboy, *supra* note 121, at 1525. Additionally, this method of compensating for inflation has been found undesirable because it requires continued judicial involvement. *See* Krause, *supra* note 117, at 1529.

[124] *See* Elligett, *supra* note 118, at 133-39. Problems with respect to periodic payment statutes include whether the trial court or the jury should determine the number of years over which payments should be made, *see id.* at 138, and whether the consent of one or both parties should be required, *see* MODEL PERIODIC PAYMENT OF JUDGMENTS ACT § 3(a), 14 U.L.A. 6 (West Supp. 1982).

[125] *See* Corboy, *supra* note 121, at 1526. No state has adopted the Model Periodic Payment of Judgments Act, 14 U.L.A. 2 (West Supp. 1982), and at least one commentator apparently believes that the Act will never be successful. *See* Corboy, *supra* note 121, at 1526. Indeed, the designating of the Act a "Model" as opposed to a "Uniform" Act indicates the drafters' realization that it has little chance of enactment in a significant number of jurisdictions. *Id.*

Some limited periodic payment schemes have been subject to constitutional challenge. *See, e.g.*, American Bank & Trust Co. v. Community Hosp. of Los Gatos-Saratoga, Inc., 163 Cal. Rptr. 513 (Ct. App. 1980); Note, *Recent Legislation: the Kansas Approach to Medical Malpractice*, 16 WASHBURN L.J. 395, 418-19 (1977). In *American Bank & Trust*, the California Court of Appeals affirmed a lower court's ruling that the California periodic payment

Despite the shortcomings inherent in lump-sum judgments, most economists believe that they would provide adequate compensation if inflation were to be factored into them.[126] Several methods have been proposed to accomplish this purpose.[127] Those most commonly discussed by the commentators, though infrequently adopted by the courts, are based essentially upon the *Fisher* theory of interest rates.[128] Under these methods, estimation of the real rate of interest alone allows the economist to account for inflation.[129] Since direct economic estimation is required, however, the problems of credibility and clarity associated with the evidentiary approach apply.[130] Additionally, to the extent that the estimated inflation rate contained in the discount rate lags behind actual inflation, these methods automatically underestimate inflation,[131] and thus undercompensate the plaintiff.[132]

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statute violated the equal protection clause of the fourteenth amendment, since it only applied to medical malpractice cases. 163 Cal. Rptr. at 516-22.

[126] *See, e.g.*, Carlson, *supra* note 20, at 631; Coyne, *supra* note 7, at 31; Formuzis & O'Donnell, *supra* note 40, at 304-05; Franz, *supra* note 22, at 37; Peck & Hopkins, *supra* note 2, at 377.

[127] *See, e.g.*, Carlson, *supra* note 20, at 630-31 (allowing the discount rate to offset increases in wages); Coyne, *supra* note 7, at 29-31 (compounding and then discounting, deriving all figures from specific information about the plaintiff where practicable); Formuzis & O'Donnell, *supra* note 40, at 302 (using the relationship between wage increase rates and interest rates to predict the wage increase rate).

[128] *See* Feldman v. Allegheny Airlines, Inc., 524 F.2d 384, 388 (2d Cir. 1975). The *Feldman* and *English* methods are discussed more frequently by courts than by economists. *See* Culver v. Slater Boat Co., 688 F.2d 280, 295-96 (5th Cir. 1982) (en banc); Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 37-38 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981); O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1199 (7th Cir. 1982).

[129] *See* O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1199-1200 (7th Cir. 1982). The *O'Shea* court discussed two methods by which inflation could be accounted for in calculating lost future earnings. *Id.* In both of these methods, only estimation of the real rate of interest is required. *See id.* The first method, which also was used in *Feldman*, accounts for inflation by removing the inflation component from the discount rate. *Id.* This is accomplished by discounting the award with the real rate of interest, which by definition does not contain an inflation component. *Id.* at 1199. This lower discount rate results in a larger final award. The second method uses the real rate of interest to estimate the inflation rate. *Id.* The real rate is subtracted from the discount rate. *Id.* The resulting figure is used to compound base annual earnings before applying the discount rate. *Id.* Both of these methods are based on the assumption that the discount rate contains an inflation factor. *Id.*

[130] *See supra* notes 108-15 and accompanying text.

[131] *See, e.g.*, I. FISHER, *supra* note 27, at 43; Hazlitt, *Inflation and Interest Rates*, 27 FREEMAN 213, 216 (1977); McCracken, *Interest Rate Forecasting . . . and Other Popular Delusions*, 159 BANKERS MAG. 71, 74 (1976). Since the *Fisher* theory implicitly assumes that the real rate of interest remains stable over time, an estimation problem arises if this stability does not in fact occur. The validity of the stable real rate assumption continues to be a source of controversy among economists. Gibson, *Interest Rates and Inflationary Expectations: New Evidence*, 62 AM. ECON. REV. 854, 854 (1972). Many economists support the

Two other inflation-compensation suggestions avoid the evidentiary problems inherent in predicting either the real rate or the future inflation rate. The first method, devised by Professors Formuzis and O'Donnell, is based upon the hypothesis that there is a constant relationship between the discount rate and the national rate of wage growth.[133] By applying regression analysis[134] to 3-year moving averages[135] of interest rates and wage-growth rates

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theory that the real rate fluctuates. *See, e.g.*, Carlson, *Short-Term Interest Rates as Predictors of Inflation: A Comment*, 67 AM. ECON. REV. 469, 469 (1977). *But see* Fama, *Interest Rates and Inflation: The Message in the Entrails*, 67 AM. ECON. REV. 487, 496 (1977) (real rate may fluctuate, but its variation reflects changes in the inflation rate); Gibson, *supra*, at 863 (real rate constant for short-term interest rates). In view of this uncertainty concerning the behavior of the real rate, it would appear less speculative to base predictions concerning wage and price increases on the relationship that these factors bear to the discount rate. *See* Formuzis & O'Donnell, *supra* note 40, at 299. The existence of a predictable relationship between wage increase rates and interest rates is uncontroverted. *See, e.g.*, Franz, *supra* note 22, at 36.

[132] *See* Culver v. Slater Boat Co., 688 F.2d 280, 392 (5th Cir. 1982) (en banc).

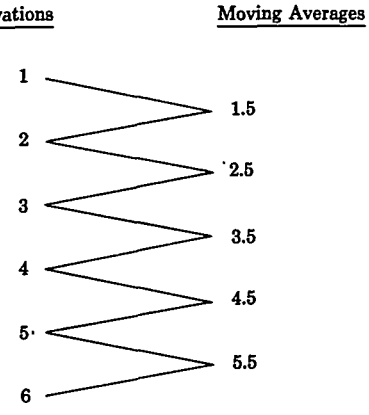
[133] Formuzis & O'Donnell, *supra* note 40, at 299.

[134] Regression analysis, as the term is used in econometrics, is defined as "a method for predicting the value of a dependent variable from known values of independent variables." C. AMMER & D. AMMER, DICTIONARY OF BUSINESS AND ECONOMICS 358 (1977). For a brief summary of how regression analysis operates, see *infra* text accompanying notes 134-43.

[135] A moving average is defined as:

> [A] series of calculations made by taking the simple average or arithmetic mean, of a consecutive number of items, then discarding the first item and adding the first of the remaining items, and continuing the process, so that the number of items in the series remains constant.

C. AMMER & D. AMMER, *supra* note 134, at 278; *cf.* Formuzis & O'Donnell, *supra* note 40, at 300 n.14 (defining moving average as taken for 1 year only). Moving averages are calculated using successive, equal-sized clusters of observations. The process can best be demonstrated by means of a simple example:



For a similar illustration, see C. AMMER & D. AMMER, *supra* note 134, at 278.

using data for a 20-year period,[136] they discovered that the wage increase rate consistently exceeded the rate of discount by 1.4%.[137] Using this result, they devised the following procedure to factor inflation into lost future earnings: the discount rate is increased by 1.4 to produce an estimated rate of wage increase;[138] base annual earnings then are compounded by this estimated rate prior to discounting.[139]

This method presents clear advantages. Not only is it simple to explain and apply, but it also lends itself to the formulation of an inflation-accounting rule which could be incorporated easily into the existing discounting rule accepted by the courts.[140] Furthermore, by eliminating the need for testimony concerning the inflation rate, a possible source of confusion and prejudice is eliminated.[141] According to its formulators, the method's accuracy was affirmed by a statistical test[142] and its efficiency has been demonstrated in trial courts.[143]

The final method of accounting for inflation's impact, promul-

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[136] *See* Formuzis & O'Donnell, *supra* note 40, at 300-02.

[137] *Id.* at 302.

[138] *Id.*

[139] *See id.* Professors Formuzis and O'Donnell do not explain that the estimate of the wage increase rate obtained by their method is then used to compound lost future earnings, as pointed out by Professor Franz, who tested the same method. *See* Franz, *supra* note 22, at 36-37.

[140] In the past, several courts have favored the adoption of a fixed numerical value to aid in damages calculations. *See, e.g.*, Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 40 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981) (approving the standardization of a two percent "real" discount rate) (dictum); Brodie v. Philadelphia Transp. Co., 415 Pa. 296, 300, 203 A.2d 657, 659 (1964) (citing Pennsylvania's mandatory 6% rule).

[141] Franz, *supra* note 22, at 37; Sherman, *supra* note 20, at 733; Note, *Loss of Future Earnings: Present Worth Versus Wage Growth*, 35 MONT. L. REV. 354, 360 (1974); Note, *supra* note 10, at 127; *see* Carlson, *supra* note 20, at 629.

[142] *See* Formuzis & O'Donnell, *supra* note 40, at 304-05.

[143] *See id.* at 305. Although Professors Formuzis and O'Donnell claim that their method has been used successfully by trial courts in California, Colorado, Montana, Washington, and the Dakotas, they give no support for this claim. *See id.*

There are indications that state courts, while willing to compensate a plaintiff for the effects of future inflation, may be less willing to embrace economic estimates based on unarticulated assumptions. *See, e.g.*, Tenore v. Nu Car Carriers, Inc., 67 N.J. 466, 483-85, 341 A.2d 613, 622 (1975); Kaczkowski v. Bolubasz, 491 Pa. 561, 583-84, 421 A.2d 1027, 1038-39 (1980). The *Tenore* court refused to admit tables containing aggregated estimates of the plaintiff's total damages for two reasons. 67 N.J. at 482, 341 A.2d at 622. First, the estimates were based upon assumptions as to the decedent's future earnings capacity and personal expenses that the economist should not have made. *Id.* The second ground for rejection of the tables stemmed from the court's belief that presentation of estimates to the jury denied it the opportunity to evaluate the assumptions underlying these estimates and was thus unduly prejudicial. *Id.* at 483-84, 341 A.2d at 622.

gated by Professor Carlson, eschews calculations altogether. Unlike most of his colleagues, Professor Carlson contends that it is possible to compensate a plaintiff adequately for the impact of inflation upon lost future earnings by eliminating the discounting process.[144] This approach also is simple to explain and apply since it requires presentation of little economic evidence.[145] Moreover, because it requires that only one assumption be made—that the discount rate equals the wage increase rate—this method involves less speculation than the Formuzis and O'Donnell approach.[146] In addition, awards based on the Carlson method would be predictable and thus would tend to encourage settlements.[147] Professor Carlson's

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[144] *See* Carlson, *supra* note 20, at 630-31. A small number of economists support Professor Carlson's approach. *See* Franz, *supra* note 22, at 37 (Carlson method preferred over the Formuzis/O'Donnell method for courtroom use); Sherman, *supra* note 20, at 733.

Professor Carlson's assumption that the impact of the wage increase rate and the discount rate cancel out hinges on the nature of the compounding and discounting processes. *See, e.g.*, Carlson, *supra* note 20, at 629; Franz, *supra* note 22, at 37. These processes are arithmetical inverses of each other as can easily be demonstrated. Let X equal the amount of base earnings. If X is first compounded by $(1 + i)$, the discounting process produces the following results:

$$\text{Present value of } X(1+i) + X(1+i)\frac{1}{(1+i)}$$

$$= X\frac{(1+i)}{(1+i)}$$

$$= X$$

See P. SAMUELSON, *supra* note 8, at 615 n.4; *supra* note 19.

[145] *See, e.g.*, Franz, *supra* note 22, at 37.

[146] *See, e.g.*, Pfeifer v. Jones & Laughlin Steel Corp., 678 F.2d 453, 461 (3d Cir.), *cert. granted*, 103 S. Ct. 50 (1982). Professor Carlson applies his offset method to wage gains resulting from productivity increases as well as those due to inflation. Carlson, *supra* note 20, at 631. His rationale for this appears to be that since current national productivity trends are low and presently show a tendency to decline, it is fair to assume the plaintiff's annual productivity increase to be zero if he is representative of his occupation. *Id.* In such an economic climate, the real rate of return on an investment—the appropriate discount rate for this situation—should behave similarly. *Id.* Offsetting productivity increase rates against the rate of return on investment, therefore, is reasonable. *Id.* Professors Formuzis and O'Donnell suggest that this assumption produces the proper result, but for a different reason. Productivity, they contend, is built into wage growth rates just as the real rate is built into the discount rate. Formuzis & O'Donnell, *supra* note 40, at 299-300. Inflation is the other component of both rates. *Id.* at 300. Thus, the difference between the rate of wage growth and the rate of interest is a direct reflection of the difference between the rate of increase in productivity and the rate of return on capital. *Id.*

[147] *See, e.g.*, Kaczkowski v. Bolubasz, 491 Pa. 561, 571, 421 A.2d 1027, 1038 (1980). Predictability of the size of the award is no insignificant benefit when one recalls that the plaintiff has the option of negotiating for a structured settlement if it appears that the court

method has been disapproved of, however, on the ground that it consistently underestimates the impact of inflation upon the plaintiff's award.[148] Since there is a stable nonzero differential between wage increases and discount rates,[149] the Carlson method necessarily undercompensates for inflation to the extent of this difference.[150] Clearly, a rule that attempts to estimate this difference is fairer than one that ignores it. It is submitted, therefore, that the federal courts should adopt the Formuzis/O'Donnell method as a matter of law. While estimates of the wage increase/discount rate differential vary, these estimates cluster near the 1.4% figure that Professors Formuzis and O'Donnell discovered.[151] Thus, the amount of error in the final award would be slight by comparison with the Carlson method, which assumes that no difference exists. Indeed, it is as unreasonable to refuse to estimate this difference as it would be to refuse to account for inflation at all.[152] Furthermore, this approach retains the simplicity and efficiency advantages of the Carlson method. If adopted with the understanding that future changes in the American economy may require adjustment in the differential used, it would appear that the Formuzis/O'Donnell approach offers a better balance of equity, certainty, and efficiency than any of the other methods proposed.

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award might be inadequate. *See supra* notes 117-21 and accompanying text.

[148] *See, e.g.*, Steckler v. United States, 549 F.2d 1372, 1377-78 (10th Cir. 1977); United States v. English, 521 F.2d 63, 73-75 (9th Cir. 1975); Coyne, *supra* note 7, at 31; Formuzis & O'Donnell, *supra* note 40, at 303-04; Lipnowski, *supra* note 7, at 331; Maher, *Estimating Future Earnings Loss: Misinterpretation and Faulty Logic*, TRIAL, Feb., 1979, at 39, 41; Ward, *supra* note 7, at 63.

[149] Formuzis & O'Donnell, *supra* note 40, at 299; Franz, *supra* note 22, at 36.

[150] *See* Formuzis & O'Donnell, *supra* note 40, at 302-03. If the wage increase exceeds the discount rate used to calculate the lost earnings by one to two percent, that amount of annual wage increase will not be factored into the award. *See id.*

[151] *See* Franz, *supra* note 22, at 36. Professor Franz only indicated that the wage increase/discount rate differential was "over 1%." *Id.* Professor Coyne found a 1.6% differential. Coyne, *supra* note 7, at 26. Neither of these estimates is substantially different from the Formuzis/O'Donnell 1.4% figure. *See* Formuzis & O'Donnell, *supra* note 40, at 302.

[152] *See, e.g.*, Culver v. Slater Boat Co., 688 F.2d 280, 294-95 (5th Cir. 1982) (en banc); O'Shea v. Riverway Towing Co., 677 F.2d 1194, 1200 (7th Cir. 1982); Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30, 36-37 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981). Several federal courts have observed that inflation is so much a part of American economic reality that it is unreasonable to refuse to estimate its effect on awards merely because making such an estimate requires speculation. *E.g.*, Doca v. Marina Mercante Nicarguense, S.A., 634 F.2d 30, 37 (2d Cir. 1980), *cert. denied*, 451 U.S. 971 (1981). Similarly, choosing a simple but inaccurate estimation method is unreasonable if more accurate and equally simple methods exist. *See* Coyne, *supra* note 7, at 25.

CONCLUSION

A number of approaches have been devised to incorporate the impact of inflation into lost future earnings calculations. While all of these proposals provide the plaintiff with fairer compensation than the traditional procedure, courts quite properly have not accepted any method without determining how well it comports with the policy considerations of equity, certainty, and efficiency. Economists, who presumably are best qualified to judge the accuracy of economic prediction methods, have been slow to evaluate the competing proposals.[153] While a number of courts have attempted to perform such an evaluation, they arguably have neither the time nor the expertise for such a task.[154]

Thus far, the federal courts have admitted evidence of inflation rates, but have hesitated to lay down a fixed rule to use in damage calculations. This approach, though fair, is impractical. The method proposed by Professors Formuzis and O'Donnell, how-

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[153] Articles recently published by economists on the topic of future inflation's impact on damages generally have been aimed at persuading the reader of the practicality and accuracy of the method advocated by the author. *See, e.g.*, Carlson, *supra* note 20, at 628; Formuzis & O'Donnell, *supra* note 40, at 305; Sherman, *supra* note 20, at 723. Those articles that do not take a partisan approach often merely review factors that should be taken into account in damage computations. *See, e.g.*, Henderson, *supra* note 8, at 308; Peck & Hopkins, *supra* note 2, at 377. Economists who have chosen to discuss approaches used by their colleagues often do not attempt to be comprehensive. *See* Coyne, *supra* note 7, at 27-28; Maher, *supra* note 148, at 39.

A study comparing the results produced by all of the calculation methods previously discussed would be a valuable contribution to the literature on this topic. One possible approach is that used by Professors Formuzis and O'Donnell in testing their hypothesis. Twenty random "accident" dates were selected between 1955 and 1975. Formuzis & O'Donnell, *supra* note 40, at 304. It was assumed that each plaintiff was deprived completely of future earning capacity, and that the worklife of each would end in 1975. *See id.* Using the interest rate available on short-term government securities on the date of the "accident" as the discount rate, "awards" were calculated. *Id.* The amounts of these "awards" were then compared with actual interest rates and earnings. *Id.* Such a study, done on a larger number of awards and comparing a number of different methods, would allow for a more reliable evaluation of the fairness of each method.

[154] The burdensome caseload with which the American judicial system struggles is undisputed. *See, e.g.*, Meador, *The Federal Judiciary—Inflation, Malfunction, and a Proposed Course of Action*, 1981 B.Y.U. L. REV. 617, 618-20 (federal court statistics); Flango & Blair, *Creating an Intermediate Appellate Court: Does It Reduce the Caseload of a State's Highest Court?*, 64 JUDICATURE 75, 75 (1980) (statistics concerning state appellate courts). It also should be remembered that judges usually are not economic experts. *See* Plourd v. Southern Pac. Transp. Co., 266 Or. 666, 513 P.2d 1140, 1145 (1973). Nor can a busy judge be certain that counsel will alleviate his ignorance of this technical field with expert testimony. *See* Fisher, *supra* note 70, at 403. One reason for this simply may be uncertainty as to how to use such testimony advantageously. *See* Ward, *supra* note 7, at 60.

ever, is simple as well as fair, and avoids the efficiency and certainty problems posed by other methods. This method, which provides a reasonable balance of the relevant policy concerns, constitutes the best option available to the courts.

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